Range extensions, taxonomic and ecological notes from Serranía de los Yariguíes, Colombia's new national park

by Thomas M. Donegan, Jorge E. Avendaño-C., Elkin R. Briceño-L. & Blanca Huertas

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In Colombia, the Andes split into three more or less parallel, north–south oriented mountain ranges, the West, Central and East Andes. At 6°–7°N, the East Andes reach their widest point and the Serranía de los Yariguíes (or Serranía de los Cobardes) forms an isolated north-west spur rising from the río Magdalena Valley to *c.*3,400 m (Fig. 1). Serranía de los Yariguíes lies entirely within dpto. Santander. Details of its geography are presented in Donegan & Huertas (2005) and Huertas & Donegan (2006).

Until recently, the relatively small Cachalú reserve (Charalá and Virolín, dpto. Santander) was considered to harbour the only remaining humid temperate oak

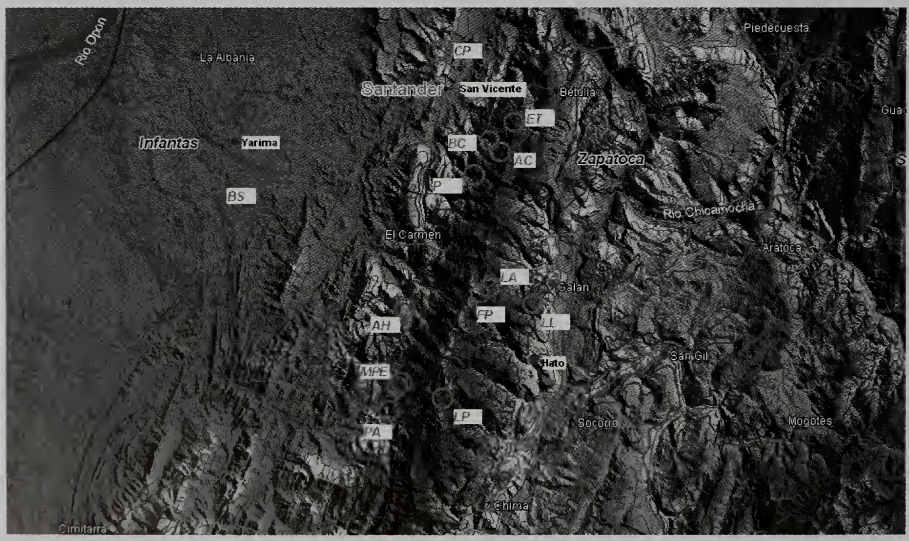


Figure 1. Location of study sites in Serranía de los Yariguíes, as follows (low to high elevation, west to east): BS: Bajo Simacota (W: 130 m); MPE: Montana Pedro Elías (W: 500 m and 750 m); PA: Plan de Álvarez (W; 500–1,350 m); CP: Cerro de la Paz (W: 1,000 m and 1,300 m); AH: Alto Honduras (W: 1,600 m); P: Primavera (W: 1,700 m); ET: El Talisman (W: 2,000 m); BC: Bajo Cantagallos (W: 1,000–2,300 m); AC: Alto Cantagallos (W: 2,450 m); LP: Lepipuerto (W: 2,900–3,000 m); FP: Filo Pamplona (E: 3,200 m); LA: La Aurora (E: 2,700 m); LL: La Luchata (E: 2,000 m). Also Fundación Natura (2003) site Zapatoca (1,600–2,800 m) and historic ICN collecting locality Chima (1,400 m). The rivers extending from Chima to the río Chicamocha and isolating Yariguíes from the main East Andean range are the ríos Sogamoso and Suárez.

TABLE 1
Sites in Serranía de los Yariguíes studied by ourselves and others.

Study site	Elevation (m)	Slope	Coordinates	Municipality participants	Study	Dates	Bird field work
Yarima–Bajo Simacota	100–150	west	06°46'N, 73°44'W	Simacota	YARÉ	January 2006; December 2006	TMD, JEAC; JEAC
Plan de Alvarez, San Juan Bosco	500–1,350	west	06°27'N, 73°32'W	Santa Helena del Opón	JEAC thesis field work	September 2006	JEAC
Montaña Pedro Elías	500–750	west	06°31'N, 73°37'W	Simacota	JEAC thesis field work	October 2006; February 2007	JEAC (both)
Cerro de la Paz (east slope / Montebello)	1,000	west	06°59'N,73°26'W	Zapatoca	EBA	January 2003; October 2006; 1956–58	TMD, ERBL; JEAC; J. I. Hernández, J. I. Borrero & H. Vidales.
Cerro de la Paz (west slope / Barro Amarillo)	1,300–1,350	west	06°59'N, 73°26'W	Zapatoca	EBA	January 2004; November 2006	TMD, ERBL; JEAC
Bajo Cantagallos	1,000–2,300	west	06°49'N, 73°22'W	San Vicente de Chucurí	EBA	January 2004; November 2006; January 2006	TMD, ERBL; JEAC; M. Sharp, C. Turner & J. C. Luna.
Honduras Alto	1,600	west	06°37'N, 73°30'W	El Carmen de Chucurí	YARÉ	January 2006; December 2006	TMD, JEAC; JEAC
Primavera	1,700	west	06°47'N, 73° 25'W	San Vicente de Chucurí	YARÉ	February 2006	M. Sharp; C. Turner; J. C. Luna
El Talisman (now ProAves nature reserve 'Reinta Cielo Azul')	2,000	west	06°51'N, 73°22'W	San Vicente de Chucurí	EBA	January 2003; November 2006; 2004 to present.	TMD, BH, ERBL; JEAC; J. C. Luna *et al.*
Alto Cantagallos	2,450	west	06°49'N, 73°22'W	San Vicente de Chucurí	EBA	January 2004; November 2006	TMD, ERBl; JEAC
Lepipuerto, Alto río Chimera	2,900–3,000	west	06°28'N, 73°28'W	El Carmen de Chucurí / Simacota	EBA	January 2005	TMD, BH, M. Donegan
Chima	1,400	east	06°22'N, 73°22'W	Simacota	ICN collections	1968–72	P. Cala & P. Bernal
Zapatoca (vereda Bellavista / 'Páramo de Don Toribio')	1,600–2,800	east	06°48'N, 73°21'N	Zapatoca	Fundación Natura (2003)	2002	C. Roa
La Luchata	2,000	east	06°38'N, 73°19'W	Galán	YARÉ	July 2005; April 2006	TMD, JEAC; JEAC
La Aurora	2,700	east	06°38'N, 73°24'W	Galán	YARÉ	July 2005; April 2006	TMD, JEAC; JEAC
Filo Pamplona	3,200	east	06°38'N, 73°24'W	Galán	YARÉ	July 2005	TMD, JEAC

forest in the northern East Andes (e.g. Stattersfield *et al.* 1998). However, since 2003, we have studied a significant forest wilderness in Serranía de los Yariguíes on Colombian Evaluation of Biodiversity in the Andes (EBA) Project field work. This forest had gone unstudied due to historical political instability. The only published biological notes from the massif involved a brief lowland study of vertebrates during which a few tens of bird specimens were collected (Borrero & Hernandez 1957), with various other specimens and ad hoc observations mentioned elsewhere (e.g. Romero 1983, Bates 1997, Renjifo *et al.* 2002, Fundación Natura 2003). We returned in 2004–05 for further studies on EBA Project field work and in 2005–06 on the BP Conservation Programme-sponsored Proyecto Yariguíes Assessment and Research Expedition (YARÉ), to include the entire elevational range and both slopes of the range in our studies.

Aerial surveys by TMD and BH and satellite maps (IGAC 1999) revealed Serranía de los Yariguíes to constitute one of the largest premontane and montane forest wildernesses in the northern Andes (Donegan & Huertas 2005). Pristine primary forest covers most of the west slope and ridgeline, whilst the east slope is largely deforested. During our field work in 2003–06, we studied habitats on the west slope at 100–3,000 m, the highest elevation being accessed by helicopter, and on the east slope at 2,000–3,200 m. JEAC returned to several sites to undertake additional surveys in 2006–07.

Details of all sites studied are presented in Table 1. Access and characteristics of each are described in Donegan & Huertas (2005) and Huertas & Donegan (2006). Notably, the west slope appears more humid than the east, being characterised by day-round ground-level fog above 1,500 m and, especially at higher elevations, extraordinary levels of precipitation.

Subsequent to our field work and that of others in the region (e.g. Fundación Natura 2003), Serranía de los Yariguíes has been declared a 78,000-ha National Natural Park (Ministerio del Medio Ambiente, Desarrollo y Vivienda 2005), an Alliance for Zero Extinction site (Ricketts *et al.* 2005) and an Important Bird Area (AICA: Franco & Bravo 2005), and Fundación ProAves has established a nature reserve there (see Donegan & Huertas 2005, Huertas & Donegan 2006).

Study sites

Study sites are set out in Table 1. Each site was located within primary or mature forest as far as practicable from human populations and was studied for five days. Exceptions were: Bajo Simacota, a threatened lowland forest fragment of *c.*3 km × 4 km where secondary forest was also surveyed; and Cerro de la Paz, La Luchata, Bajo Cantagallos and El Talisman which each included some forest-edge habitats. Our field work methods involved rapid assessment protocols used by previous EBA Project expeditions: (i) mist-netting (10–18 mist-nets per site operated for 12 hours each day); and (ii) observations by two observers and sound-recordings. All birds trapped were photographed and measured (wing, tail, tarsus, culmen and weight; data and photographs available from the authors or ProAves). Mist-netting

mortalities were inevitable in a study of this nature and a handful of specimens of potentially undescribed taxa were also taken. Almost all are housed at Instituto de Ciencias Naturales, Universidad Nacional, Bogotá (ICN), with a handful of duplicates at Universidad Industrial de Santander, Bucaramanga (UIS). Blood and tissue samples have been deposited at UIS, Instituto Alexander von Humboldt (IAVH) and Universidad de los Andes. TMD's sound-recordings are archived at the British Library National Sound Archive, London, and most at IAVH in Colombia. Some recordings mentioned herein will be posted on Xeno-Canto (www.xeno-canto.org). Various photographs were published in Donegan & Briceño (2005) and Donegan & Avendaño (2006).

This paper details the most significant new distributional records from our field work. Also mentioned are certain of the *c.*130 specimens at ICN collected mostly in secondary habitats around San Vicente de Chucurí by J. I. Hernández, H. Vidales and J. I. Borrero in the 1950s and 1960s; by R. Ardila in the early 1980s principally at Cerro de la Paz but also at Primavera; and those collected by P. Bernal and P. Cala in the río Suárez Valley at Chima in the 1960s and 1970s. We note certain of the records of Fundación Natura (2003) during their brief surveys in the Zapatoca and Landazurí regions. Finally, we are aware of a biological survey funded by the energy company ISA in the early 2000s (referenced in Fundación Natura 2003), but have been unable to locate a copy of the report. In any event, we understand that the surveys took place largely in the San Vicente de Chucurí / Zapatoca region, at premontane elevations, i.e. those habitats in which our observations and those of others have been concentrated.

Although we are aware that many others have worked recently in the East Andes of Santander and Boyacá (notably at Cachalú and Iguaque), we report only new records from the Yariguíes massif and refer to other records from the main East Andes only for species reported here and only to evidence a wider range than currently supposed in mainstream literature. Some data come from DATAves (2006) and other unpublished sources, the accuracy of which we cannot vouch. We exclude from Serranía de los Yariguíes (and hence the direct scope of this paper): (i) sites east of the río Suárez (e.g. collections from Veléz and Suaita at ICN and sites studied recently in Parque Nacional Natural Chicamocha by J. Parra *et al.*); (ii) sites south of *c.*06°15'N (including the Fundación Natura site near Landázuri in Cerro de las Armas); (iii) sites north of Betulia (07°00'N); (iv) the main Eastern Andes; and (v) sites west of Bajo Simacota, e.g. along the río Magdalena and highway.

The following other localities, listed alphabetically with approximate coordinates and (sometimes) elevations, are mentioned herein: Agua de la Virgen, Norte de Santander (08°13'N, 73°24'W; 1,600–1,750 m; East Andes); Albania, Santander (06°52'N, 73°40W; 100–800 m; Magdalena Valley); Aguachica, Cesar (08°19'N, 73°38'W; 200 m; East Andes); Anorí, Antioquia (07°03'N, 75°07'W; 1,500–1,800 m; Central Andes); Bucaramanga, Santander (07°08'N, 73°07'W; East Andes); Cachalú / Charalá / Virolín, Santander (*c.*06°03'N, 73°09'W; 1,850–2,750 m; East Andes); Cerro la Judia, Santander (07°05'N, 73°00'W; 1,000–2,400 m; East Andes); Chicamocha (Parque Nacional Natural), Santander (06°27'N, 72°54'W;

600–2,300 m; East Andes); Cimitarra, Santander (06°20'N, 73°55'W; 100 m; East Andes), laguna Pedro Palo, Cundinamarca (04°45'N, 74°24'W; East Andes); Landázuri, Santander (06°15'N, 73°50'W; East Andes); Chicaque (Parque Nacional), Cundinamarca (04°37'N, 74°18'W; 2,000–2,700 m; East Andes); Frontino, Antioquia (06°25'N, 76°05'W; 2,500–3,900 m; West Andes); Fusagasugá, Cundinamarca (04°20'N, 74°20'W; East Andes); Mámbita, Boyacá (73°20'W, 04°47'W; East Andes); Iguaque (Sanctuario de Fauna y Flora), Boyacá (05°40'N, 73°27'W; East Andes); Landázuri (Cerro de las Armas / vereda Morro Negro Alto), Santander (05°00'N–06°18'N; 73°08'–73°50'W; 1,000–1,700 m; East Andes), Pamplona, Norte de Santander (07°25'N, 72°40'W; East Andes); los Picachos (Parque Nacional Natural), Meta and Caquetá (02°30'–03°10'N, 74°30'–75°00'W; East Andes); Pajarito, Boyacá (05°23'N, 72°42'W; East Andes); Portugal, Lebrija, Santander (07°09'N, 73°17'W, 1,100 m; East Andes); Puerto Olaya, Cimitarra, Santander (06°30'N, 74°22'W; 100 m; Magdalena Valley); Rogitama, Arcabuco, Boyacá (05°47'N, 73°31'W; East Andes); Rondón (Santa Isabel), Boyacá (05°45'N, 73°04'W; East Andes); Sabana de Torres, Santander (07°25'N, 73°30'N; 100 m; Magdalena Valley); Santa María, Boyacá (04°52'N, 73°45'W; East Andes); Serranía de las Quinchas, Boyacá (06°00'N, 74°00'W; 200–1,700 m; East Andes); Serranía de los Churumbelos, Cauca (01°10'–01°30'N, 76°15'–76°30'W; 300–2,500 m; East Andes); Serranía de San Lucas, Bolivar and Antioquia (06°30–07°30'N, 74°00'–74°30'W; 150–1,400 m, Central Andes); Soatá, Boyacá (05°07'N, 73°07'W; East Andes); Suaita, Santander (06°04'N, 73°28'W; East Andes); Suratá, Santander (07°23'N, 73°00'W; East Andes); Tamá (Parque Nacional Natural), Norte de Santander and Venezuela (07°00'–07°40'N, 72°00'–72°30'W; East Andes); Tambito (Reserva Natural), Cauca (02°30'N, 77°00W; 1,400–2,500 m; West Andes); Tona (finca El Brasil), Santander (07°08'N 73°03'W; East Andes); Veléz, Santander (*c.*06°05'N, 73°42'W; East Andes).

Below, we present details of our observations, followed by a discussion of the species' previously known range in the region and the significance of our record/s. Some taxonomic and ecological notes made during the study are also noted. Numbers in brackets refer to the number of birds caught at a site, with a semi-colon splitting EBA/YARÉ records from later JEAC fieldwork and † indicating any specimens. Where no semi-colon or other note is made, data are from EBA/YARÉ studies. Taxonomy, order and nomenclature follow Remsen *et al.* (2007). Subspecies are noted only where identified to this level.

Major range extensions

The following records involve range extensions of more than 100 km, new biogeographical records or other important records, including taxa new to the Magdalena Valley, East Andes or west slope of the East Andes, southward extensions in range of species known from the Perijá or Tamá mountains, and northward extensions in range of species known from published records only to Cundinamarca or further south on the west slope.

SICKLE-WINGED GUAN *Chamaepetes goudotii*
A typically noisy group was heard at El Talisman, though not observed or sound-recorded. Previously known in the East Andes only as far north as dpto. Cundinamarca, 250 km south of Yariguíes (Hilty & Brown 1986).

SCALED PIGEON *Patagioenas speciosa*
Sound-recorded at Bajo Simacota. There is also a 1970s ICN skin from Veléz, a UIS specimen from Sabana de Torres and records near the río Magdalena in nearby Serranía de San Lucas (Salaman & Donegan 2001) and Puerto Olaya (DATAves 2006: E. Constantino), but no published records from the west slope of the East Andes (Hilty & Brown 1986).

AFRICAN COLLARED DOVE *Streptopelia roseogrisea*
A free-flying bird photographed at Bajo Cantagallos (at *c.*1,800 m). An escaped pair was recently observed in Norte de Santander (Donegan & Huertas 2002, Donegan *et al.* 2003). Apparently an isolated individual, but this common cagebird in Colombia is clearly prone to escape and has become established elsewhere in the world.

BARRED PARAKEET *Bolborhynchus lineola*
Observed frequently in small flocks of up to 16 over La Aurora, Filo Pamplona and Alto Cantagallos. Its high, fast-paced calls were sound-recorded. A captive individual, apparently from the adjacent east flank of the río Sogamoso at 1,300 m (municipio Girón, vereda Altamira), was seen on 8 April 2004 (JEAC). *B. lineola* is known on the west slope of the East Andes only near Salazar in the southern Perijá Mountains, in Norte de Santander, and Peñon, Cundinamarca (Rodríguez & Hernández 2001), as well as in the southernmost section in Caquetá (Hilty & Brown 1986) and from the east slope in Cundinamarca and Cauca (Salaman *et al.* 2002b). Though still few, these records suggest the species may, at least formerly, have been continuously distributed in suitable habitat in the East Andes. Our records close a *c.*300 km gap between those in Cundinamarca and Norte de Santander.

SCALY-NAPED PARROT *Amazona mercenaria*
Small flocks observed frequently and sound-recorded at Lepipuerto, Alto Honduras, Alto Cantagallos, La Aurora and Filo Pamplona, and common at La Judía at 2,400 m (JEAC, ERB). Reported on the west slope of the East Andes only north to Cundinamarca (Hilty & Brown 1986, Rodríguez & Hernández 2001), 250 km to the south, although hypothesised possibly to extend this far north (Rodríguez & Hernández 2001) and recorded in Boyacá on the east slope (Salaman *et al.* 2002b). Also recorded in the northernmost East Andes, in Serranía de Perijá (Hilty & Brown 1986). The species occurs usually at low densities (Fjeldså & Krabbe 1990), making its abundance in the large primary premontane and montane forests of Yariguíes notable.

CENTRAL AMERICAN PYGMY-OWL *Glaucidium griseiceps*
One sang for over 30 minutes after dusk at Cerro de la Paz (1,000 m) and was sound-recorded. Also recently observed at the same site, at 1,350 m (JEAC), and collected at Montaña Pedro Elías (0; 1†). The song comprised a repeated series of monotone hoots at 1.1–1.5 kHz, given every *c.*0.035 s and typically in series' of 8–10 notes (Fig. 2). Our recordings are similar to those described by Howell & Robbins (1995) and recordings of *G. griseiceps* by P. M. Valenzuela in Cotacachi-Cayapas Ecological Reserve, Ecuador (Jahn *et al.* 2002), and by S. Woltmann at río San Juan, refugio Bartola, Nicaragua (no. 6785 www.xeno-canto.org). *G. griseiceps* is known in South America from specimens taken in north-west Colombia and north-west Ecuador (Howell & Robbins 1995, Robbins & Howell 1995) and observations in Los Katios National Park in 1991 (F. G. Stiles & L. Rosselli *in litt.* 2006). We suspect it was *G. griseiceps* (and not *G. brasilianum*) that was observed in humid habitats in Anorí, Antioquia (A. M. Cuervo *in litt.* 2006) and in the western foothills of Serranía de San Lucas (Salaman *et al.* 2002a). Our record is the first East Andes and Magdalena Valley record of *G. griseiceps* and a range extension of *c.*300 km east from the Sinú (or *c.*150 km east from the Central Andes, if confirmed). The voices of *G. griseiceps* and the *ridgwayi* group of *G. brasilianum* in northern South America are very similar, comprising similar numbers of hoots, delivered at a similar frequency and pace. That of *G. griseiceps* differs from the *G. b. ridgwayi* group from Venezuela (Boesman 1999), Central America (Xeno-canto nos. 582 and 1322) and those of the nominate race east of the Andes (Xeno-canto nos. 275 and 6305), in being delivered slightly slower (>0.03 s / note vs. <0.03 s / note in *G. brasilianum*) and with a more plaintive quality involving a flatter (not intonated) note spectrographically (P. Coopmans *in litt.* 2006). In Central and South America, they further separate by habitat, with *G. griseiceps* in humid forest and *G. brasilianum* in drier regions (S. Woltmann & P. Coopmans *in litt.* 2006). It is possible that *G. griseiceps* ranges continuously in suitable habitat of the Chocó and Nechí Endemic Bird Areas, and across the northern Central Andes to humid lowlands of the Magdalena Valley.

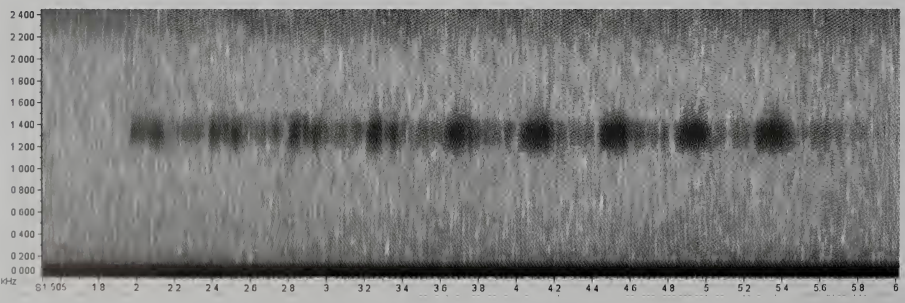


Figure 2. Sonogram of song of Central American Pygmy-owl *Glaucidium griseiceps*, Cerro de la Paz (1,000 m), Serranía de los Yariguíes, January 2003. Recording by TMD.

GREAT POTOO *Nyctibius grandis*
Sound recorded at Bajo Simacota and Montaña Pedro Elías. Known previously from only one other locality in the Magdalena Valley (Hilty & Brown 1986).

WHITE-TIPPED SWIFT *Aeronautes montivagus*
Common throughout Serranía de los Yariguíes with flocks of 5–40 daily at El Talisman, La Luchata (photos, video and sound-recordings), below Alto Honduras (sight), Montaña Pedro Elías and down to the towns of Galán and San Vicente de Chucurí and environs. An overlooked specimen is from near San Vicente de Chucurí, taken in the 1970s (ICN 28040). Calls consisted of a screaming trill given at *c.*25 notes/s, varying considerably in frequency between individuals or within a call, but typically at *c.*5–7 kHz. Unpublished observations on the west slope exist in Cundinamarca and Boyacá (e.g. Chicaque: C. D. Cadena *in litt.* 2006) and in Soatá and Chicamocha (F. G. Stiles *in litt.* 2006). Two females in body and wing moult were taken by JEAC north-east of Bucaramanga on 24 December 2004 (ICN 35330, 35331) where it is also common. This was probably a pre-breeding moult, given that the species supposedly breeds in April–July (Hilty 2003, Strewe 2004). Though common in parts of Colombia, *A. montivagus* was previously considered hypothetical in the country, being known solely from sight records including from three scattered localities in the East Andes (Hilty & Brown 1986, Salaman *et al.* 2002b, Strewe 2004, Ramírez & Ocampo 2006).

TAWNY-BELLIED HERMIT *Phaethornis syrmatophorus syrmatophorus*
Trapped and photographed (Fig. 4), at high-elevation sites on both slopes of Serranía de los Yariguíes, at El Talisman (1), Alto Cantagallos (1; 7+1), Lepipuerto (1), La Aurora (1†; 1) and La Luchata (1†; 0). The pale-breasted *columbianus* race is reported from the East Andes north to Cundinamarca (Salaman *et al.* 2002b). The Yariguíes population has little white in the belly, like specimens at ICN from the Central Andes in Quindío and Antioquia, labelled as being the nominate, which has not previously been recorded in the East Andes. In the foothills, it was replaced by Green Hermit *P. guy* (at Montaña Pedro Elías, Cerro de la Paz and Alto Honduras). *P. guy* was also present at La Luchata (2,000 m) in April 2006, the breeding season for most species in the region, whilst *P. syrmatophorus* was not recorded then. *P. syrmatophorus* has not previously been reported anywhere on the west slope of the East Andes. It is apparently absent from Serranía de las Quinchas (F. G. Stiles *in litt.* 2006), perhaps due to the relatively high elevation at which *P. guy* occurs in the region. The records at 2,900 m in Lepipuerto are unusually high for *P. syrmatophorus* in Colombia, though it has been recorded at 3,100 m in Ecuador (Ridgely & Greenfield 2001).

BLACK-MANDIBLED TOUCAN *Ramphastos ambiguus*
Lowland *R. a. abbreviatus* was observed frequently and sound-recorded at Bajo Simacota, Montaña Pedro Elías and Cerro de la Paz (where the head of a recently

hunted bird was photographed). In lower montane forest at Alto Honduras (1,600 m) and El Talisman (2,000 m), probably the same taxon (on a basis of call vs. *R. a. ambiguus*) was heard. Also collected at Albania (ICN skins) and reported below Landázuri (Fundación Natura 2003). Highland *R. ambiguus* populations were also recently heard at Tona (JEAC) but not identified to either of the two possible taxa in the region. *R. a. abbreviatus* ranges to 1,800 m in Venezuela (Hilty 2003) but has been recorded only to 1,300–1,400 m in Colombia (Hilty & Brown 1986, Donegan & Salaman 1999, Salaman & Donegan 2001; F. G. Stiles *in litt.* 2006), with *R. a. ambiguus* in cloud forests on the east slope (e.g. Salaman *et al.* 1999). The higher elevations to which *R. a. abbreviatus* ranges in the Yariguíes suggest that it and *R. a. ambiguus* replace one another on opposite slopes of the East Andes, rather than elevationally. There is unlikely to be any permanent zone of contact due to the high ridgeline of the East Andes in this region. Some recent publications lump *R. a. ambiguus* with *R. a. swainsonii / abbreviatus* (Short & Horne 2001, 2002, Remsen *et al.* 2007), whilst others treat them specifically (Hilty & Brown 1986, Ridgely & Greenfield 2001, Hilty 2003, Weckstein 2005). Stiles *et al.* (1999) suggested that splitting *ambiguus* from *swainsonii / abbreviatus* would have some vocal and biometrical support. Individuals of *R. a. swainsonii* and *R. a. ambiguus* were recently found to be *c.*1.4% divergent in mtDNA but no *R. a. abbreviatus* were sequenced and it cannot be stated whether *ambiguus* and *swainsonii / abbreviatus* are mutually monophyletic (J. Weckstein *in litt.* 2006).

RED-HEADED BARBET *Eubucco bourcieri*

Pairs or small family groups observed by TMD on several occasions at Alto Honduras feeding on a fruiting Melastomataceae also frequented by White-mantled Barbet *Capito hypoleucus*, whilst a pair was photographed at Primavera (C. Turner & M. Sharp: Fig. 5) and a female observed at El Talisman (JEAC). *E. bourcieri* has been observed several times at Chicaque (T. Cowley *et al.* unpubl.; B. Porteous *in litt.* 2006, F. G. Stiles *in litt.* 2006), laguna Pedro Palo, Pajarito and Santa María (F. G. Stiles & L. Rosselli *in litt.* 2006). Apparently fairly continuously distributed in lower montane forest borders on the east slope of the East Andes (Salaman *et al.* 2002b) and Perijá (Hilty 2003), but there are no published records on the west slope of the East Andes.

YELLOW-VENTED WOODPECKER *Veniliornis dignus*

A male observed well, between Galán and La Luchata, in a small patch of secondary woodland at *c.*1,600 m (TMD & JEAC), was identified by its all-red cap, strong facial markings, relatively small size, barred breast and belly, and yellowish undertail. Though widespread in the Central and West Andes, the species was known previously only from one published record in the East Andes, at Fusagasugá, Cundinamarca (Hilty & Brown 1986), 300 km to the south, though it is also known from Venezuela's Mérida range (Hilty 2003).

PYGMY ANTWREN *Myrmotherula brachyura*
A male seen well on several occasions at Montaña Pedro Elías (500 m), foraging from mid levels to the subcanopy in mixed-species flocks (JEAC). It was identified by its narrow black malar and black back with broad white streaks. The similar Pacific Antwren *M. pacifica* was observed in Parque Miraflores, near San Vicente de Chucurí town centre (TMD). *M. brachyura* is known from the Chocó lowlands through the upper río Sinú to upper Nechí (Hilty & Brown 1986). Ours is the first East Andes and Magdalena Valley record of *M. brachyura* and a range extension of 200 km south-east.

RUFOUS-RUMPED ANTWREN *Terenura callinota*
Trapped and photographed at El Talisman (2: ♂ and ♀; 0) and recently observed at Honduras Alto (JEAC). Our photographs are consistent with the nominate race. Previously unknown north of Bogotá in the East Andes of Colombia, *c.*250 km south of El Talisman, with *S. c. venezuelana* in Serranía de Perijá (Zimmer & Isler 2003).

SCHWARTZ'S ANTTHRUSH *Chamaeza turdina*
C. turdina was heard and sound-recorded at El Talisman (JEAC), Alto Cantagallos (JEAC), Lepipuerto (TMD), and La Aurora (0; 1♀† with follicular ovary). Three to four were heard on our 500-m transect at La Aurora. *C. turdina* is known north to 04°35'N on the east slope of the East Andes (Hilty & Brown 1986, Salaman *et al.* 1999, 2002b), but not from the west slope. The Yariguies specimen differs subtly from one taken in Serranía de los Churumbelos by TMD *et al.* (ICN 33448) in having fewer dark throat spots, less obvious moustachial markings and darker brown upperparts. We are unable to assess whether this represents individual or geographic variation, though similar degrees of back colour variation are noted between some *Grallaricula* subspecies (TMD unpubl.). *C. turdina* has been recorded from various 'new' sites in Colombia in recent years (e.g. Álvarez 2000, Salaman *et al.* 2002b, Echeverry & Córdoba 2007), but few specimens or photographs exist. Our recordings recall those from elsewhere: a rapid series of loud, repetitive energetic hoots at 1.5–2.0 kHz, increasing in frequency over time. However, almost all our natural recordings are less than 30 s long, whilst longer calls are typical elsewhere, e.g. Cundinamarca (Álvarez 2000), Parque Nacional Natural los Picachos (M. Álvarez-R. *in litt.* 2006), Serranía de los Churumbelos (A. M. Cuervo *in litt.* 2006) and Venezuela (*C. t. chionogaster*: Boesman 1999), though shorter calls are given in response to playback (Krabbe & Schulenberg 2003a).

SLATE-CROWNED ANTPITTA *Grallaricula nana*
Fairly common by voice at Alto Cantagallos (0; 1†) in November and Lepipuerto (2†, see Donegan & Huertas 2005) in January. Also present at La Aurora (1†), where not heard in July or April. Heard and two collected recently at Suratá, Santander, at 3,000 m (JEAC). The population in Serranía de los Yariguíes and Suratá apparently

represents an undescribed race, possibly together with birds of the northern Central Andes in Antioquia and Risaralda. They have a rather pale orange breast reminiscent of birds in Tamá and Mérida, Venezuela, but lack the white collar of those populations. Specimens of *G. n. nana* from the east slope of the East Andes have ferruginous not orange-red underparts. Sound-recordings broadly recall those from the Central Andes (Álvarez & Cordoba 2002), but differ from Mérida, Tamá and east-slope recordings (Boesman 1999, Álvarez 2000, Krabbe & Schulenberg 2003b). Ours is the first record of *G. nana* for the west slope of the East Andes and the first of birds allied to the Central Andes population in the East Andes.

OCHRE-BREASTED ANTPITTA *Grallaricula flavirostris*
Present at La Luchata (0; 1†), Alto Honduras (0; 1) and El Talisman (0; 1†). Also collected recently by F. G. Stiles at Suaita (ICN). Though fairly widespread on the southern east slope of the East Andes (Hilty & Brown 1986, Salaman *et al.* 2002b), it has not previously been reported on the west slope of the East Andes or north of 02°50'N, 500 km south of Yariguíes. Considerable variation (probably age-related) is evident in Yariguíes, Central Andes and Suaita skins, particularly in the black breast markings. Like *C. turdina*, more research is required to assess whether variation is individual or geographical. An implausibly large number of races of *G. flavirostris* are described from Ecuador but relatively few are considered present in Colombia (Krabbe & Schulenberg 2003a).

WHITE-CROWNED TAPACULO *Scytalopus atratus*
Observed and sound-recorded at Alto Honduras (1†) where fairly common. Sonograms are similar to those from Peru and dpto. Cundinamarca (Krabbe & Schulenberg 1997). Those observed and the specimen showed considerable white belly streaking. One from the east slope of the East Andes, in dpto. Meta, labelled *S. a. atratus* (ICN 32621) shows less streaking. Another, labelled *S. a. confusus*, from Anorí in the Central Andes of Antioquia, taken by A. M. Cuervo (ICN 34387), is intermediate in this feature. Other than the extent of belly streaking, all three specimens are similar. Krabbe & Schulenberg (1997), noting the vocal similarities between birds on the west slope of the East Andes and in Peru, restricted *S. a. confusus* to the Colombian Central and West Andes. It is unknown whether plumage differences between nominate *S. atratus* and '*S. a. confusus*' reflect geographical or individual variation.

TAPACULO *Scytalopus* sp.
A *Scytalopus* was common by voice at El Talisman (0; 2†), but rare at La Luchata (0; 1†). The call comprised a 5–6 s *ap ap ap ap ap*... refrain at *c.*7 notes/s, pitched at *c.*1.5 kHz, and is superficially similar to Nariño Tapaculo *S. vicinior* (Moore *et al.* 1999, Krabbe *et al.* 2001), the recently described Upper Magdalena Tapaculo S. rodriguezi (Krabbe et al. 2005) and some recordings provisionally assigned to *S. meridanus* from premontane Venezuela (e.g. sonogram 67 *in* Krabbe & Schulenberg

1997, from Los Frailes Hotel, Mérida, by P. Coopmans). As will be discussed further elsewhere (Donegan & Avendaño-C. ms), the Venezuelan recording noted above may not relate to *S. meridanus* but could be of an undescribed taxon related to the Yariguíes population.

Certain lower montane specimens assigned to *S. meridanus* from the east slope of the East Andes (e.g. from near Pamplona, Norte de Santander, at Museo La Salle, Bogotá (MLS 3990–93), a 'Bogotá' skin (BMNH 89.9.10.995) (see Acknowledgements for acronyms) probably concern the same species as the Yariguies population. They have broadly similar plumage to many other *Scytalopus* in Colombia previously assigned to *S. femoralis* (e.g. Hilty & Brown 1986) and differ from *S. vicinior* and *S. rodriguezi* in biometrics and plumage tone (Donegan & Avendaño ms). The Luchata bird has an obvious wingbar on the greater coverts, apparently an immature feature. Recordings of the Yariguíes and Mérida populations differ from those of *S. vicinior* in that the individual notes are upstrokes (increasing in frequency) but downstrokes (decreasing in frequency) in *S. vicinior*, and from S. rodriguezi in being faster and less variable in intra-note frequency.

S. vicinior is considered present only on the west slope of the West Andes (Krabbe & Schulenberg 1997), north to dpto. Risaralda, 350 km south-west of Yariguíes (Cuervo *et al.* 2003), with *S. rodriguezi* known only from the headwaters of the Magdalena Valley (Krabbe et al. 2005). Two recent studies in the Central Andes did not find *S. vicinior* (Cuervo *et al.* 2005, Krabbe *et al.* 2005), nor have our studies of *Scytalopus* in most major Colombian and some European collections from the East Andes. Doubt was correctly cast on the identity of historic specimens, supposedly of this species, from the Central and East Andes (Krabbe & Schulenberg 1997), which appear likely to refer to Long-tailed Tapaculo *S. micropterus*, Stiles's Tapaculo *S. stilesi*, Spillmann's Tapaculo *S. spillmanni*, the undescribed taxon discussed here, or other morphologically similar species.

SPILLMANN'S TAPACULO *Scytalopus spillmanni*

Sound-recorded and trapped at La Aurora (2†; Fig. 5). *S. spillmanni* has also recently been reported at Rogitama (J. Zuluaga *in litt.* 2006). It is previously known in Colombia only from the Central and West Andes (Krabbe & Schulenberg 2003b). These records are the first for the East Andes. Our sound-recordings are indistinguishable from those made in the Central Andes (Álvarez & Córdoba 2002), but specimens from Yariguíes are darker than those from the Central Andes and Ecuador (including the holotype). Geographical variation in Colombia is complex (e.g. Cuervo *et al.* 2003, Krabbe *et al.* 2006) and requires further investigation. This new East Andes population appears to involve an undescribed subspecies.

HANDSOME FLYCATCHER *Myiophobus pulcher bellus*

M. p. bellus was present at Alto Cantagallos (1; 0) and recently observed and sound-recorded at La Aurora by JEAC. *M. p. bellus* (East and Central Andes of Colombia and eastern Ecuador) is identified by the contrasting breast and underparts, browner

back, more cinnamon wingbars, darker red crown and longer tail compared to nominate *M. p. pulcher* (West Andes and western Ecuador). With two exceptions (BMNH 88.1.1.1249, ICN 29164), specimens of *M. p. bellus* typically have five primaries with paler remiges (from the second outermost inwards) whilst *M. p. pulcher* (and *M. p. oblitus* of Peru) typically have only 3–4 primaries so marked (from the third outermost). At Alto Cantagallos in January, only lone individuals were observed by TMD, whilst at La Aurora in April a (family?) group of four was seen by JEAC perched on horizontal twigs of midstorey small trees and tree ferns. They sallied 3–4 m, occasionally ascending to 6 m and frequently moved their vertical stratification with continuous position interchanges. Such 'fidgety' behaviour is similar to that of *M. p. pulcher* at Tambito, West Andes (TMD). The principal foraging aerial manoeuvre was the sally-hover (Remsen & Robinson 1990), to capture small arthropods below the leaves, with a few sally-glides. One vocal bird at La Aurora was observed on three occasions clinging woodpecker-like from moss-carpeted tree bark to pull at moss then shake it free from a perch, presumably searching for invertebrates. *M. p. bellus* was previously known from just two sites in the East Andes: on the west slope in Cundinamarca, *c.*250 km to the south, and on the east slope in northern Santander (Hilty & Brown 1986, Fjeldså & Krabbe 1990, Ridgely & Tudor 1994).

JEAC sound-recorded *M. p. bellus* making a rapid trill, identical to certain calls given by *M. p. bellus* in eastern Ecuador (Moore & Lysinger 1997). Examples of some such calls do not occur in published recordings of *M. p. pulcher* from Ecuador (Moore *et al.* 1999), but this may reflect lack of sampling. Some calls, such as sequences of falling notes and energetic 'chips', are given by both taxa.

M. p. pulcher and *M. p. bellus* were described by Sclater (1860, 1862) who noted that *M. p. bellus* is 'easily distinguishable [from *M. pulcher*] by its larger size and larger wings', but were lumped by Berlepsch (1905) with little published justification. The two indeed differ somewhat in biometrics (Sclater 1862, Bond 1943). Mensural data from specimens and live birds at Tambito and Yariguíes are as follows (mean ± standard deviation in mm or g, with number of specimens in parentheses): *bellus* wing 58.5 mm ± 3.9 (13), tail 48.6 mm ± 3.1(13), mass 11.3g ± 1.6 (4); *pulcher* wing 52.8 mm ± 2.9 (23); tail 41.1 mm ± 2.9 (20); mass 9.1g ± 0.6 (12). Tail-length (*pulcher* <43 mm <*bellus*) reliably identifies *c.*90% of our sample. Whilst differences between *bellus* and *pulcher* are frequently noted with little comment (Hilty & Brown 1986, Fjeldså & Krabbe 1990, Ridgely & Greenfield 2001), their plumage and biometric differences are not insubstantial within the context of a family in which inter-specific morphological variation is often slight (e.g. *Myiobius*, *Myiarchus*, *Empidonax*). Vocalisations are considered innate in Tyrannidae (Kroodsma 1984) and are worthy of further study in these birds. *M. p. oblitus* of Peru is almost indistinguishable from *M. p. pulcher* in plumage and biometrics, despite its disjunct range (Bond 1943).

Specimens examined.—*M. p. pulcher*: BMNH 88.1.13.857 (type), 88.1.1.1249, 1931.11.23.15, 1938.12.20.38–39, University Museum of Zoology, Cambridge

University, UK (UMZC) 27/Tyr/59/e/1; ICN 29041, 29044, 29164, 29170; *M. p. bellus*: BMNH 88.1.13.859, 88.1.13.861–62 (types), 88.1.1.1245; ICN 27360; Museo de Historia Natural, Universidad del Cauca, Popayán, Colombia (MHNUC) A01860, A01892; Instituto Alexander von Humboldt (IAVH) 2541, 2548, 2551; Museo La Salle, Bogotá (MLS) 5060, 7930. *M. p. oblitus*: BMNH 88.1.13.858.

CLIFF FLYCATCHER *Hirundinea ferruginea sclateri*
Eight observed, video- and sound-recorded below La Luchata and adjacent El Cerro, and two at Bajo Cantagallos (1,200m: JEAC), were all identified as race *sclateri* due to their white crown mottling. At 2,000 m, La Luchata is an unusually high elevation in Colombia (Hilty & Brown 1986), though the species ranges higher elsewhere (Fjeldså & Krabbe 1990). One was also observed on the other side of the río Sogamoso Valley at 1,300 m on 8 April 2004 (JEAC). The most frequently heard call was a high-frequency, rather weak *Pi-weet* or shorter *weet*, whilst other recorded calls involved a *Weeet wi-wi-wi* sometimes extended to *weeet wi-wi-wi-wi-wi*. Not previously reported from the west slope of the East Andes but known from several localities on the east slope (Hilty & Brown 1986, Fjeldså & Krabbe 1990, Salaman *et al.* 2002b).

LEMON-BROWED FLYCATCHER *Conopias cinchoneti*
Common at Montaña Pedro Elías and recently mist-netted at *c.*1,700 m at Bajo Cantagallos (J. C. Luna, C. Turner & M. Sharp, photograph). Although this secondary habitat and forest-edge species must be widespread in the region, it is virtually unknown from the East Andes in Colombia, beyond historic Bogotá records (Hilty & Brown 1986).

WHITE-CAPPED TANAGER *Sericossypha albocristata*
Common at La Aurora, where several were observed daily and sound-recorded, and rare at Alto Cantagallos (JEAC). The frequently heard call is a repeated *pio* as in Ecuador (Krabbe *et al.* 2001) and on the east slope (TMD). The species has also recently been reported from Cachalú (Corredor de Conservación 2006) and Suratá (JEAC). Though known from various sites on the east slope of the East Andes (Hilty & Brown 1986, Isler & Isler 1999, Salaman *et al.* 2002b), there were no published records from the west slope.

LACRIMOSE MOUNTAIN-TANAGER *Anisognathus lacrymosus*
Present at Alto Cantagallos (0; 1†), Lepipuerto (2) and Filo Pamplona (11+3: Fig. 6). Though Hilty & Brown (1986) considered the species to be widespread in the northern East Andes, more recently its range in this region has been considered restricted to the Venezuelan border and Perijá (Fjeldså & Krabbe 1990, Isler & Isler 1999). The Yariguíes population is closest in plumage to the more richly plumaged Central Andean *A. l. olivaceiceps* than greyer headed *A. l. tamae* (northern East Andes and south to Suratá [JEAC]) or *A. l. pallididorsalis* (Perijá). However, Yariguíes birds have a darker, bluer head than *A. l. olivaceiceps* and represent an

undescribed taxon. In addition, species limits should be investigated further as plumage differences between the various northern races are substantial.

WHITE-WINGED TANAGER *Piranga leucoptera*
Several were observed in mixed-species flocks at Alto Honduras (TMD, JEAC), with recent observations at El Talisman (J. C. Luna *in litt.* 2006), Cachalú (Corredor de Conservación 2006) and Tona (JEAC). *P. leucoptera* is known on the west slope of the East Andes from Norte de Santander north and from Cundinamarca south (Hilty & Brown 1986). Our observations close this *c.*350 km gap.

SOOTY GRASSQUIT *Tiaris fuliginosus*
Trapped and photographed in Cerro de la Paz (1,300 m, 1♀) and a female in body moult trapped at La Luchata (0; 1). Recently reported in Santa Marta (Strewe & Navarro 2004), 400 km to the north, but specimens identified as *T. fuliginosus* from near Cerro de la Paz (Borrero & Hernández 1961), the upper Patía Valley (Haffer 1986) and elsewhere in Colombia (Hilty & Brown 1986) are *T. obscura* (Bates 1997). The only valid Colombian specimen was taken by Carriker in the 1960s at 'Portugal, Santander', considered an unknown locality (Bates 1997). There is a Portugal in Santander (see introduction) where several *T. fuliginosus* were recently collected (Avendaño 2005). Whilst not a range extension, confirmation of its presence in the Magdalena Valley in Colombia is notable and our record at 2,000 m (La Luchata) is unusually high. Whilst Strewe & Navarro (2004) recently purported to identify the Santa Marta population to the race *T. f. zuliae*, Bates (1997) contended that the species is best considered monotypic for now.

STRIPE-HEADED BRUSH-FINCH *Buarremon torquatus assimilis*
A pair, clearly showing the head-stripes of this race, was observed well in heavily degraded habitat at Bajo Cantagallos (*c.*1,800 m; TMD, ERB). *B. t. assimilis* was previously known only north to Cundinamarca in the East Andes, 200 km to the south (Hilty & Brown 1986), with specimens from Boyacá. Black-headed Brush-finch *B. t. atricapillus* was recently observed at Cerro de la Paz (JEAC) and is known from historical Bucaramanga records (Hilty & Brown 1986). *B. t. atricapillus* was also recently observed at Portugal at 1,100 m (specimen and sound-recordings: Avendaño 2005). *B. t. atricapillus* ranges from Bucaramanga south to Serranía de las Quinchas (Laverde *et al.* 2005a) and occurs in adjacent lowlands of the Serranía de San Lucas in the Central Andes (Salaman *et al.* 2002a). The two taxa are sympatric on the west slope of the East Andes in Boyacá and Santander, with *B. t. atricapillus* at lower elevations. The proposition that these morphologically distinct taxa are members of the same biological species appears unsupportable, but the status of apparently related Central American taxa creates difficulties. A detailed study of the taxonomy of this complex is underway (Cadena 2006).

Northwards range extensions from Serranía de las Quinchas or Boyacá

The following species have all been recorded on the west slope of the East Andes in Boyacá (Hilty & Brown (1986) or were recently reported from Serranía de las Quinchas, a site subject to relatively intense study in recent years (e.g. Stiles *et al.* 1999, Stiles & Bohórquez 2000, Laverde *et al.* 2005a,b, Quevedo *et al.* 2006a). All represent northward range extensions of 100–150 km on the west slope of the East Andes and many are first departmental records for Santander or second or third localities for the East Andes. Such details are not listed in the texts below, but taxonomic and distributional notes are made for certain species, and some unpublished records from other sites in Santander and elsewhere are mentioned.

VARIABLE/COLOMBIAN CHACHALACA *Ortalis guttata columbiana* Common in lower-elevation second growth and forest-edge throughout. The loud, repeated, hoarse *guacharaca* call was sound-recorded at dawn at Cerro de la Paz (both sites) and La Luchata. One captured locally was photographed near Cerro de la Paz (Donegan & Huertas 2005). *O. g. columbiana* is also present in the main cordillera in Santander (Rodríguez *et al.* 2005). Chestnut-winged Chachalaca *O. garrula* occurs in similar habitat in nearby dptos. Cesar and Bolívar (Salaman & Donegan 2001, Donegan *et al.* 2003) and at Puerto Olaya (DATAves 2006).

BLUE-BILLED CURASSOW *Crax alberti* Historically present, according to locals, in San Vicente de Chucurí, El Carmen, San Juan Bosco and Yarima, but has apparently become locally extinct in many parts of Yariguíes, with no reports more recent than a decade old at most localities. A *Crax* was reported as recently as 2005 at Montaña Pedro Elías (500 m) but was killed for its meat. Pristine lowland forest bordering the south-west Yariguíes Mountains, between Cimitarra and San Juan Bosco, observed on a flight in July 2004 (TMD, BH), may still harbour a small population, but is subject to hunting. The East Andes population once probably extended at least as far north as southern Cesar, where it was also reported as formerly present by older hunters (Donegan *et al.* 2003), and probably through the entire Serranía de Perijá to Santa Marta (Renjifo *et al.* 2002, Quevedo *et al.* 2006b).

COCOI HERON *Ardea cocoi* Lone birds twice observed over Bajo Simacota. Also observed in small numbers along the río Magdalena near Puerto Wilches (Salaman *et al.* 2002a), in southern Cesar (Donegan *et al.* 2003) and at Puerto Olaya (DATAves 2006).

DOUBLE-TOOTHED HAWK *Harpagus bidentatus* At Montaña Pedro Elías (500 m: 0), where observed feeding a nestling in February 2007, and reported by the ISA study (unspecified locality), *per* Fundación Natura (2003).

BICOLOURED HAWK *Accipiter bicolor* An immature, apparently ♂ (195 g), of this uncommon hawk was mist-netted in the understorey at Montaña Pedro Elías

(705 m). It had the eighth primary of each wing in moult, but little body or tail moult. Also present at Suratá (JEAC).

BARRED HAWK *Leucopternis princeps* A pair observed daily at *c.*09.00–10.00 h at El Talisman, Honduras Alto and both sites in Cerro de la Paz. One soared over La Luchata just after dawn. More widespread than currently perceived (Hilty & Brown 1986), e.g. being common at La Judía at 2,000–2,300 m (ERB, JEAC).

BARRED FOREST-FALCON *Micrastur ruficollis interstes* A pale-phase immature trapped at Cerro de la Paz (1; 0), and heard calling at El Talisman, La Aurora and Montaña Pedro Elías (500–750 m). At Montaña Pedro Elías, it was seen following a mixed-species understorey flock including Sooty Ant-tanager *Habia gutturalis* and White-breasted Wood-wren *Henicorhina leucosticta*. The mist-net mortality prey of this species included *Phaethornis guy*, *Mionectes oleagineus*, *Premnoplex brunnescens*, *Leptopogon superciliaris* and *Eucometis penicillata*.

PLUMBEOUS PIGEON *Patagioenas plumbea bogotensis* A *hoo, hu-hooo* song (rarely *hoo-hoo, hu-hooo*) was heard regularly at Montaña Pedro Elías, Cerro de la Paz, Alto Honduras and El Talisman. An overlooked ICN skin is from Cachalú. The typical call was at *c.*0.7 kHz, the first and second notes separated by 0.25 s, the last two by 0.1 s and the second note slurring slightly lower. It involved fewer notes than the rhythmical *Who cooks for you?* on the Pacific slope of the Andes in Cauca (race *chapmani*; TMD) and had the final note longer than birds east of the Andes (race *delicata*). Ruddy Pigeon *P. subvinacea*, giving its typical *What do you know?* call, was sound-recorded at La Luchata, Alto Honduras, El Talisman and La Aurora, at some sites sympatric with *P. plumbea*. Further studies of *P. plumbea* would be welcome, as *bogotensis* and other vocally distinctive taxa may warrant species rank.

LINED QUAIL-DOVE *Geotrygon linearis* Records at Cerro de la Paz (1; 0, at 1,000 m and 1,300 m), Alto Honduras, El Talisman (1) and La Luchata (0; 2). The call was a repeated low hoot given from the forest floor. *G. linearis* was sympatric with Ruddy Quail-dove *G. montana* at 1,000–1,350m m in Cerro de la Paz (3; 1), an unusually low elevation for *G. linearis*. There are also specimens from Charalá and Suaita (ICN).

SPECKLE-FACED PARROT *Pionus tumultuosus* Flocks observed and photographed at Alto Cantagallos and Primavera.

BRONZE-WINGED PARROT *Pionus chalcopterus* Flocks sound-recorded and observed daily at Montaña Pedro Elías, Plan de Álvarez and Honduras Alto. Locally captured birds were photographed in captivity at El Diviso, between El Carmen de Chucurí and Honduras Alto, at Plan de Álvarez and San Juan Bosco.

CRESTED OWL *Lophostrix cristata* Heard at Montaña Pedro Elías (500 m; JEAC) but not higher. Also recorded historically in the Lebrija Valley, 80 km to the north (Hilty & Brown 1986).

LYRE-TAILED NIGHTJAR *Uropsalis lyra* Females observed in forest-edge at El Talisman and La Luchata (TMD). Also recently mist-netted at El Talisman (J. C. Luna; M. Sharp & C. Turner photograph).

CRIMSON-BELLIED WOODPECKER *Campephilus haematogaster* One trapped at Montaña Pedro Elías (750 m), and observed close to a tree trunk, inspecting a hole 3 m high.

WHITE-TIPPED SICKLEBILL *Eutoxeres aquila* Trapped at Montaña Pedro Elías (500 m: 1; 0), Cerro de la Paz (6; 4 at 1,000 m; 11+1; 16+7 at 1,300 m), Alto Honduras (3), Primavera, El Talisman (1; 0) and La Luchata (1). ICN specimens are from Charalá and Suaita.

GREEN-FRONTED LANCEBILL *Doryfera ludoviciae* Observed or trapped at Bajo Cantagallos, El Talisman (2), Filo Pamplona (1), La Luchata (10+1; 4+3), Montaña Pedro Elías (750 m), Plan de Álvarez, and Zapatoca (Fundación Natura 2003) and Cachalú (Corredor de Conservación 2006).

BROWN VIOLETEAR *Colibri delphinae* Fairly common, Cerro de la Paz at 1,300 m (3; 0) and El Talisman (JEAC) with ICN specimens from Charalá and Suaita.

RUFOUS-CRESTED COQUETTE *Lophornis delattrei* Recently at forest border in Cerro de la Paz (1,350 m: 0; 1♂†).

VIOLET-HEADED HUMMINGBIRD *Klais guimeti* Mist-netted at Montaña Pedro Elías (500 m and 750 m: 1; 1†) and Cerro de la Paz (1,300 m: 3; 0). Also reported at Cachalú (Corredor de Conservación 2006).

ANDEAN EMERALD *Amazilia franciae* Present at Cerro de la Paz (1,000 and 1,300 m: 9+2; 3), Bajo Cantagallos, El Talisman and La Luchata (3+1 and sound-recorded).

GREEN-FRONTED BRILLIANT *Heliodoxa jacula* Common at Cerro de la Paz (1,000 m: 11+5; 1,300 m: 19+5, 1†), fairly common at Alto Honduras (4+1; 3+2), rare at Montaña Pedro Elías (750 m: 0; 1), and an adult male seen in an isolated flowering tree below El Talisman (1,500 m). Known until recently from only a handful of localities in Colombia, but mist-netting at premontane forest sites has led to the discovery of many new sites in all three Andean ranges (Stiles *et al.* 1999, Donegan & Dávalos 1999, Salaman *et al.* 2002a,b, Cuervo *et al.* 2003), suggesting this hummingbird was under-recorded in the past.

WHITE-MANTLED BARBET *Capito hypoleucus* This Endangered species was observed and trapped at Alto Honduras (TMD, JEAC: 0; 1), below El Talisman (J. C. Luna *in litt.* 2006), Cerro de la Paz (JEAC at 1,350 m; J. C. Luna *in litt.* 2006) and Bajo Cantagallos (JEAC). Also reported in lowlands below Landázuri (Fundación Natura 2003). At Alto Honduras, first a pair and secondly a group of four were observed feeding on Melastomataceae fruit at mid-levels in forest. These

are the first records within Colombia's national parks network and for Santander (Renjifo *et al.* 2002), although it was thought possibly present in Yariguíes (Laverde *et al.* 2005b). The voice of *C. hypoleucus* is undescribed. The call recorded at Alto Honduras is a low (0.9–1.6 kHz) quiet frog-like *ah*, sometimes repeated 2–3 times at *c.*1-s intervals. Each *ah* lasts *c.*0.05 s and consists of perhaps three rapidly delivered elements (Fig 7).

CRIMSON-RUMPED TOUCANET *Aulacorhynchus haematopygus* Fairly common at Cerro de la Paz (1,300 m: 2; 1), Plan de Álvarez (1,300 m), Alto Honduras (observations and sound-recordings) and El Talisman (1; 0), at some sites syntopic with Emerald Toucanet *A. prasinus*.

STRIPED WOODHAUNTER *Hyloctistes subulatus cordobae* Recently trapped at Alto Honduras (0; 3, 1†).

RUDDY FOLIAGE-GLEANER *Automolus rubiginosus* At Cerro de la Paz (1,000 m: 0; 1♂†)

PARKER'S ANTBIRD *Cercomacra parkeri* Pair observed at El Talisman (TMD) and common at Alto Honduras (6+1; 1† and sound-recordings: photograph in Balchin 2006). At lower elevations, e.g. Plan de Álvarez (500 m: 1), Montaña Pedro Elías and Cerro de la Paz, *C. tyrannina* was present. A colorimeter was used to separate females from Dusky Antbird *C. tyrannina* in describing the species (Graves 1997) but, with experience, field identification is feasible if a good view is obtained of the female's upperparts. At 2,000 m, El Talisman is slightly higher than previous records. Our recordings are similar to those made in the Central Cordillera (Isler & Whitney 2002, Zimmer & Isler 2003), i.e. melodic piping calls rising then falling in frequency, with 3–5 loud, equal-paced notes then a handful delivered more quickly in finale. Notes are pitched at 2.5–3.5 kHz and the first notes given at *c.*4/s. *C. parkeri* is also known from the west slope of the East Andes based on specimens taken near Bucaramanga, Santander (Graves 1997) and more recently at Suaita, Santander (ICN specimen, by F. G. Stiles).

SLATY ANTWREN *Myrmotherula schisticolor* Common in premontane forest on the west slope, at Alto Honduras (6+3, 1†) and El Talisman (3; 1). ICN specimens hail from Suaita.

WHITE-BELLIED ANTPITTA *Grallaria hypoleuca* Common: sound-recordings were made at Alto Honduras, El Talisman, Alto Cantagallos, La Aurora and La Luchata; also reported at Landázuri (Fundación Natura 2003). A dead bird found at La Luchata (1†) had apparently been killed by an internal parasite (large Diptera larva). The call is essentially identical to that in the southernmost East Andes, in Serranía de los Churumbelos, Anorí (TMD pers. obs.) and Ecuador (Moore & Lysinger 1997), a series of three slow whistles, the first lower (*c.*1.8–2.1 kHz) than the others (*c.*1.9–2.2 kHz), with a slightly longer interval between the first and second notes than the second and third.

CHESTNUT-CROWNED GNATEATER *Conopophaga castaneiceps* Sound-recorded at Alto Honduras (confirmed by A. M. Cuervo & N. Krabbe), giving short trills similar to those given in the Central Andes, and recently captured there (0; 2†). Also, recently sound-recorded in mountains to the north-east above Bucaramanga (1,700 m: Avendaño 2005).

SOOTY-HEADED TYRANNULET *Phyllomyias griseiceps* Photographed in forest-edge below Alto Honduras and observed at Bajo Simacota (JEAC).

LESSER ELAENIA *Elaenia chiriquensis* Common in second growth on the east slope around Galán, at 1,100–1,500 m at least, with ICN specimens from Chima and Charalá.

SCALE-CRESTED PYGMY-TYRANT *Lophotriccus pileatus* Fairly widespread elevational range in forest, at Cerro de la Paz (1,300 m, 3; 3+2), Alto Honduras (4, 1†; 1), El Talisman (sound-recordings), Bajo Cantagallos, Alto Cantagallos (heard), Lepipuerto (heard) and La Luchata (1); also Charalá (ICN specimens).

WHITE-THROATED SPADEBILL *Platyrinchus mystaceus* Fairly common at Cerro de la Paz (1,350 m: 0; 3), Alto Honduras (3+1, 1†; 1), El Talisman (0; 1) and Alto Cantagallos (3+1; 1), with ICN specimens from Charalá.

BLACK-TAILED FLYCATCHER *Myiobius atricaudus* Cerro de la Paz (0; 1 at 1,000 m; 1; 0 at 1,300 m), Montaña Pedro Elías (750 m: 0; 1†) and Veléz (ICN specimen).

TROPICAL PEWEE *Contopus cinereus* Observed in scrub over a stream at Cerro de la Paz (1,000 m: TMD). Also mist-netted recently at Aguachica (Donegan *et al.* 2003).

CATTLE TYRANT *Machetornis rixosa* Common in secondary habitats on both slopes of Yariguíes and throughout surrounding Santander, following apparent recent expansions in range reported by Stiles *et al.* (1999), ABO (2000) and Salaman *et al.* (2002a).

RUFOUS-NAPED GREENLET *Hylophilus semibrunneus* Fairly frequent at both sites in Cerro de la Paz (0; 1 at 1,350 m), Alto Honduras and El Talisman.

SCRUB GREENLET *Hylophilus flavipes* Observed at Bajo Simacota and common at San Juan Bosco and Plan de Álvarez (all JEAC). Not previously recorded in the humid region between south Cesar and Boyacá.

STRIPE-THROATED WREN *Thryothorus leucopogon* Observed at Cerro de la Paz (1,000 m) and Bajo Cantagallos (1,300 m) (TMD), these also being unusually high elevations.

PALE-VENTED THRUSH *Turdus obsoletus* Trapped at 1,300 m in Cerro de la Paz (3, 1†; 0) and Montaña Pedro Elías (500 m: 0; 1). The subspecies involved requires elucidation (Stiles *et al.* 1999, Salaman *et al.* 2002a).

GRASS-GREEN TANAGER *Chlorornis riefferii* Common at high-elevation sites, Alto Cantagallos (1; 1), Lepipuerto, Filo Pamplona and La Aurora, and sound-recorded at some of these. Also at Charalá (ICN specimen).

BAY-HEADED TANAGER *Tangara gyrola deleticia* Common in Cerro de la Paz at both sites (1,300 m: 10; 3), Alto Honduras (in mixed canopy flocks in primary forest), El Talisman, Plan de Álvarez (900 m) and Montaña Pedro Elías (500 and 750 m). Also, collected at Albania (Borrero & Hernández 1961) and reported at Landázuri (Fundación Natura 2003).

SCRUB TANAGER *Tangara vitriolina* Fairly common at El Talisman, La Luchata, Plan de Álvarez (900 m), collected at Chima (ICN specimens), reported from Zapatoca (Fundación Natura 2003) and observed elsewhere in forest-edge.

ASHY-THROATED BUSH-TANAGER *Chlorospingus canigularis* At Alto Honduras (1) and El Talisman. Also reported at Rogitama (J. Beckers unpubl.) and Iguaque (Veléz 2006) but such higher elevation localities are more likely to support Common Bush-tanager *C. ophthalmicus* (F. G. Stiles *in litt.* 2006). *C. ophthalmicus*, probably of the race *flavopectus* (Cadena *et al.* submitted), was present at higher elevations of Yariguíes: El Talisman (6, 1†; 0), Alto Cantagallos (7+1; 10), Lepipuerto (1), Filo Pamplona (4, 1†) and La Aurora (0; 2), and has a rather grey head and dark eye, possibly causing confusion.

WHITE-EARED CONEBILL *Conirostrum leucogenys* Observed at Bajo Simacota (JEAC), with unpublished reports from Puerto Olaya, Cimitarra (DATAves 2006).

YELLOW-THROATED BRUSH-FINCH *Atlapetes atrinucha* Trapped at El Talisman (2), where sympatric with *A. albofrenatus albofrenatus* and *A. latinuchus yariguierum*. Remsen & Graves (1995) proposed elevational replacements to be more frequent in the genus, but this pattern appears less strong in forest-edge. Records of *A. atrinucha* also exist from Tona (2,000 m) (Peraza 2002).

BLACK-WINGED SALTATOR *Saltator atripennis caniceps* Present at La Luchata (1†), El Talisman, second growth below Alto Honduras and Bajo Cantagallos. Ridgely & Greenfield (2001) considered *caniceps* to be a synonym of nominate *atripennis*. We agree that *caniceps* does not reach Ecuador, but reject the proposed synonymy. *S. a. caniceps* is restricted to Colombia's East Andes (Meyer de Schauensee 1964). This population is easily distinguished from the nominate of the Central and West Andes south to Ecuador, being on average larger, with a less olive (stronger green) back, paler buff undertail-coverts and considerably more grey (less black) on the head (Fig. 9). Some *caniceps* (including our specimen) have a white crown-stripe, a feature absent on birds in the Central and West Andes. ICN specimen mensural data (average ± standard deviation in mm, with number of specimens in parentheses): *caniceps* wing-chord 106.5 mm ± 1.5 (5), tail 91.8 mm ± 1.8 (5); *atripennis*: wing-chord 98.7 mm ± 3.8 (14), tail 88.5 mm ± 4.6 (13).

GREY-THROATED WARBLER *Basileuterus c. cinereicollis* Fairly common at Alto Honduras (5+2; 1), but not found elsewhere, suggesting a narrow elevational range. Found mostly in treefall gaps and primary forest understorey. Most had fresh plumage, and some were completing body moult in January 2005. Also recorded above Bucaramanga (Avendaño 2005) with race *pallidus* at Agua de la Virgen (Donegan *et al.* 2003). Birds in Yariguíes showed little variation in crown colour, unlike *pallidus* (Donegan *et al.* 2003) and have stronger black crown markings.

BLUE-NAPED CHLOROPHONIA *Chlorophonia cyanea* Present at Cerro de la Paz (1,350 m: JEAC), El Talisman (JEAC) and Bajo Cantagallos (1,700 m: C. Turner & M. Sharp *in litt.* 2006). Also at Agua de la Virgen (Donegan *et al.* 2003) which represents a further range extension.

Range extensions to Yariguíes from the main East Andes

The following are known from the main East Andes (Hilty & Brown 1986, Fjeldså & Krabbe 1990, Ridgely & Tudor 1989, 1994) with records in Boyacá or Cundinamarca, or in the main cordillera in Santander (e.g. Charalá, Iguaque, Rogitama), but were not previously known from the west slope of the Magdalena Valley or Serranía de las Quinchas. Most records involve species of high-elevation forest (>2,000 m). Also included are species considered to be of fragmented or poorly known, but possibly continuous, range in the East Andes, and species we suspect have been recorded elsewhere (but unpublished) due to their common presence elsewhere in the Colombian Andes or habitat use. Records involve range extensions of 80–150 km and some represent new departmental records.

BAND-TAILED GUAN *Penelope argyrotis* Three nestlings captured by a local farmer, at 2,000 m, below La Aurora in April 2006, exhibited the whitish-buff terminal tail-band typical of the nominate race.

ANDEAN GUAN *Penelope montagnii* Present at Alto Cantagallos (sound-recordings and photograph) and Filo Pamplona (sound-recorded). The call was a repeated low-pitched *wak wak wak wak wak wak*... at 1.3–1.7 kHz, given at 4–5 notes/s, recalling the transcription in ABO (2000).

GORGETED WOOD-QUAIL *Odontophorus strophium* The population of this Critically Endangered species in Yariguíes is estimated at *c.*1,800–3,300 individuals and is the largest extant (Turner & Donegan 2006). First found at El Talisman (Donegan *et al.* 2005) and also present at Bajo Cantagallos (to 2,300 m), La Luchata, La Aurora, Filo Pamplona (to 3,100 m), Alto Honduras, Primavera and other unspecified localities (Fundación Natura 2003). Formerly considered restricted to 1,500–2,050 m (Hilty & Brown 1986).

RUSTY-FACED PARROT *Hapalopsittaca amazonina* Flocks observed and sound-recorded at Honduras Alto, Alto Cantagallos, Lepipuerto, Filo Pamplona, Bajo Cantagallos, Primavera and La Aurora (photograph).

WHITE-THROATED SCREECH-OWL *Megascops albogularis* Heard at El Talisman, common at Alto Cantagallos (sound-recorded and photographed) and sound-recorded at La Aurora.

STYGIAN OWL *Asio stygius* Sound-recorded making low, muffled, single short hoots at intervals (as in Krabbe *et al.* 2001), at La Aurora and El Talisman.

STRIPED OWL *Pseudoscops clamator* The typical *wheyoo* call reported by Hilty (2003) was recorded at Montaña Pedro Elías (750 m) after 19.00 h.

COLLARED TROGON *Trogon collaris* Fairly common in Cerro de la Paz (1,000 m, 1; 0 and 1,350 m), El Talisman (sound-recorded) and Alto Honduras (male seen). A San Vicente de Chucurí specimen (ICN) was taken by R. Ardila in 1983. *T. collaris* is known from the East Andes only north to Cundinamarca on the west slope (Hilty & Brown 1986), 300 km to the south, but specimens exist from Soatá and Charalá (ICN). Masked Trogon *T. personatus* was observed and sound-recorded at Cerro de la Paz (1,300 m), El Talisman, Alto Cantagallos, Filo Pamplona, La Aurora (2) and La Luchata, and was sometimes sympatric with *T. collaris*.

BAND-WINGED NIGHTJAR *Caprimulgus longirostris* Trapped at Filo Pamplona (1†) and heard at Alto Cantagallos (JEAC).

LAZULINE SABREWING *Campylopterus falcatus* Trapped at La Luchata (3; 1), La Aurora (0; 1) and El Talisman (0; 3), showing intriguing presence/absence patterns perhaps indicative of seasonal altitudinal movements.

CHESTNUT-BELLIED HUMMINGBIRD *Amazilia castaneiventris* Trapped in second growth below El Talisman in 2005 (J. C. Luna *in litt.* 2006). Considered Critically Endangered (BirdLife International 2004) and known from only a handful of sites, all in Boyacá and Santander (Renjifo *et al.* 2002, Chavez & Cortés 2006), making this new site of conservation import.

MOUNTAIN VELVETBREAST *Lafresnaya lafresnayi* At La Aurora (0; 2) near forest-edge and treefall gaps.

BLACK INCA *Coeligena prunellei* One of the commonest species in lower montane forest on both slopes, at Alto Honduras (3), El Talisman (16+1; 10+1), La Luchata (8+4, 2†), Bajo Cantagallos (observed at 1,700 m) and Zapatoca (Fundación Natura 2003). This threatened species was replaced by the more widespread Collared Inca *C. torquata* in forest above 2,400 m at Alto Cantagallos (9, 2†), Lepipuerto (2) and La Aurora (10+1, 1†). *C. prunellei* is endemic to the west slope of Colombia's East Andes, being known from only a handful of sites (e.g. Renjifo *et al.* 2002, BirdLife International 2004, Daza & Villamarín 2006), the closest at Cachalú (Renjifo *et al.* 2002), where it is also locally common (C. D.

Cadena *in litt.* 2006). Only one of *C. prunellei* or *C. torquata* was recorded at any of our primary forest sites, but their elevational replacement is less clear-cut in secondary habitats and forest-edge. We observed *C. torquata* at 2,100 m in forest-edge at El Cerro, just above La Luchata (*c.*300 m distant), and *C. prunellei* was present below La Aurora, at *c.*2,550 m, feeding on the same *Cavendishia* (Ericaceae) flowers as it was observed feeding on at El Talisman on the west slope. Moult in *C. prunellei* appears to occur in the late and early year. At Honduras Alto and El Talisman, almost all were in moult in January and November. At La Luchata, we found individuals completing a moult sequence in April, whilst in June at the same site none that was trapped was in moult.

GOLDEN-BELLIED STARFRONTLET *Coeligena bonapartei bonapartei* Fairly common at Filo Pamplona (4). Hilty & Brown (1986) reported this taxon only from Cundinamarca and Boyacá, the closest site being 150 km to the south. However, it is more widespread, being present at Iguaque (L. Rosselli & F. G. Stiles *in litt.* 2006) and Rogitama (R. Chavarro *in litt.* 2006). Birds in Yariguíes are closer to the nominate race than *C. b. consita* of Perijá.

AMETHYST-THROATED SUNANGEL *Heliangelus amethysticollis clarisse* Common at higher elevations, at Alto Cantagallos (7; 4), Lepipuerto (20+1, 1†), Filo Pamplona (3) and La Aurora (0; 5+2). Also photographed at Rogitama (R. Chavarro *in litt.* 2006).

PURPLE-BACKED THORNBILL *Ramphomicron microrhynchum* Trapped at Filo Pamplona (1).

LONG-TAILED SYLPH *Aglaiocercus kingi kingi* Males observed fairly frequently at El Talisman (0; 1), and La Aurora (0; 3♂), Alto Cantagallos (1♀; 1♂) and Alto Honduras (1♂).

WEDGE-BILLED HUMMINGBIRD *Schistes geoffroyi geoffroyi* Trapped or observed at Alto Honduras (2+2; 2), Bajo Cantagallos, Primavera, El Talisman (0; 1) and La Aurora (0; 2, 1†).

WHITE-BELLIED WOODSTAR *Chaetocercus mulsant* Observed at El Talisman (TMD), where a female was trapped and photographed in 2006 (J. C. Luna, M. Sharp & C. Turner *in litt.* 2006) and Alto Cantagallos (JEAC). Also, unpublished photographs from Rogitama (J. Becker; R. Chavarra & J. Zuluaga *in litt.* 2006).

BLACK-BILLED MOUNTAIN-TOUCAN *Andigena nigrirostris* Common at La Aurora around several fruiting trees and heard once distantly above Alto Cantagallos (JEAC). A Near-Threatened species, confirmation of its presence in the new national park is welcome.

GOLDEN-OLIVE WOODPECKER *Piculus rubiginosus* Heard recently at Alto Honduras, El Talisman and Alto Cantagallos (JEAC).

WHITE-CHINNED THISTLETAIL *Schizoeaca fuliginosa* Common at Filo Pamplona (4+1; Fig. 7). The subspecies involved is yet to be determined.

RUFOUS SPINETAIL *Synallaxis unirufa* Common in the highest elevations of Yariguíes, at Alto Cantagallos (3; 3), Lepipuerto (1) and Filo Pamplona (3). An undescribed subspecies is involved, more rufous than other East Andean populations.

WHITE-BROWED SPINETAIL *Hellmayrea gularis gularis* Captured at Lepipuerto (2, 1†). The Yariguíes population is of the nominate form, with brownish underparts, the specimen being a juvenile indistinguishable from juvenile *H. g. gularis* at ICN from elsewhere in the Colombian Andes as far south as Nariño.

RUSTY-WINGED BARBTAIL *Premnornis guttuligera* Fairly common in montane forest at El Talisman (2), Alto Cantagallos (1; 3) and La Aurora (1; 3). The call was sound-recorded, a sharp, high-pitched 0.1 s *tsip* falling rapidly in frequency, from *c.*9.5 to *c.*4.5 kHz, as in Ecuador (Moore *et al.* 1999).

SPOTTED BARBTAIL *Premnoplex brunnescens* Fairly common at Alto Honduras (2; 2), El Talisman (1), Alto Cantagallos (seen and sound-recorded; 2), Filo Pamplona, La Aurora (5+1, 1†; 4+3) and La Luchata (5+1; 1+3). Calls we recorded are similar to those in Ecuador (Moore *et al.* 1999).

PEARLED TREERUNNER *Margarornis squamiger* Trapped at Alto Cantagallos (3; 1), Filo Pamplona (1) and La Aurora (1; 1), and observed at El Talisman (JEAC).

STRIPED TREEHUNTER *Thripadectes holostictus* Trapped at Alto Honduras (1, at 1,500 m an unusually low elevation for Colombia). Replaced at higher elevations by *T. flammulatus*.

STREAK-CAPPED TREEHUNTER *Thripadectes virgaticeps* Recently captured at Alto Honduras (0; 1 ♂†). Also at Suiata (F. G. Stiles in litt. 2007).

FLAMMULATED TREEHUNTER *Thripadectes flammulatus* Trapped at Alto Cantagallos (1).

STREAKED XENOPS *Xenops rutilans* Sound-recorded at La Aurora.

TYRANNINE WOODCREEPER *Dendrocincla tyrannina* Seen at La Aurora, tape-recorded below Filo Pamplona (JEAC) and heard at Alto Honduras.

BROWN-BILLED SCYTHEBILL *Campylorhamphus pusillus* Trapped on both slopes, at Alto Honduras (1), El Talisman (1; 0), Alto Cantagallos (0; 1) and La Aurora (1), and sound-recorded making similar vocalisations to those in Moore *et al.* (1999) from Ecuador. Published records from the west slope of the East Andes come only from Perijá, adjacent to the Sierra Nevada de Santa Marta, 400 km to the north. Also known from various sites on the east slope of the East Andes (Hilty & Brown 1986, Salaman *et al.* 2002b). Other sites on the west slope include mountains north-east of Bucaramanga (07°14'N, 73°05'W; 1,700 m: Avendaño 2005), Suaita

(F. G. Stiles *in litt.* 2006) and Charalá (ICN), and various sites in Cundinamarca including laguna de Pedro Palo (ABO 2000; ICN specimens). *C. trochilirostris* replaces this species in Yariguíes, at lower elevations (e.g. Montaña Pedro Elías: 0; 1†) and in bamboo-dominated secondary habitats at similar elevations.

UNIFORM ANTSHRIKE *Thamnophilus unicolor* Present on both slopes, at Alto Honduras (1; 1), El Talisman and La Luchata (5+6, 1†; 1†). Published records exist from the west slope of the East Andes only north to Cundinamarca (Hilty & Brown 1986), 250 km to the south, but there are specimens from Charalá (ICN) and records at Rogitama (R. Chavarro & J. Zuluaga *in litt.* 2006). Found in scarred primary forest and forest-edge in premontane and lower montane cloud forest. *T. unicolor* appears rather similar in its male and female plumages, bill structure, bill- and wing-lengths, mass and habitat requirements to montane north-Andean *Dysithamnus occidentalis* and *D. leucostictus*. We do not doubt that these latter taxa are more closely related to *D. mentalis* than *Thamnomanes*, as noted by Whitney (1992), but further investigation is warranted.

MATORRAL TAPACULO *Scytalopus griseicollis* Common in ridgetop, treeline and *páramo* habitat at Alto Cantagallos (0; 1†), Lepipuerto and Filo Pamplona (2†), being sound-recorded many times. The Yariguíes population appears to differ from nominate *S. griseicollis* of the main East Andes by its darker breast, belly, mantle and tail, on average longer tail and small vocal differences. An undescribed subspecies is involved (Donegan & Avendaño ms).

ASHY-HEADED TYRANNULET *Phyllomyias cinereiceps* The same individual trapped twice, almost two years apart at Alto Cantagallos (1; 1), moulting its tail and primaries in November 2006. Known from just two sites in the East Andes (Hilty & Brown 1986), near Bucaramanga and Bogotá.

WHITE-TAILED TYRANNULET *Mecocerculus poecilocercus* Observed in mixed-species flocks below Filo Pamplona (*c.*3,100 m: TMD) and at Alto Cantagallos (JEAC).

RUFOUS-HEADED PYGMY-TYRANT *Pseudotriccus ruficeps* Fairly common at Alto Cantagallos (2; 2+1), Lepipuerto (1) and La Aurora (2). In the East Andes reported previously only from the east slope (Salaman *et al.* 2002b) and recently north of Bucaramanga (Avendaño 2005).

STREAK-NECKED FLYCATCHER *Mionectes striaticollis columbianus* Fairly common at El Talisman (4; 1), Alto Cantagallos (1†) and La Aurora (2; 0). Replaced at lower elevations by *M. olivaceus*, at Cerro de la Paz (1,300 m: 12+2, 1†; 13+7), Alto Honduras (12) and La Luchata (20). In Cerro de la Paz, Ochre-bellied Flycatcher *M. oleagineus* (1,000 m: 24+6, 1†; 9 and 1,300 m: sound-recorded; 4) was also present. *M. striaticollis* was unknown on the west slope of the East Andes north of Cundinamarca, but has been confirmed along almost the entire east slope (Salaman *et al.* 2002b) and observed at Rogitama (J. Beckers; R. Chavarro *in litt.*

2006). The lack of records in Serranía de las Quinchas (Stiles *et al.* 1999, Stiles & Bohórquez 2000, Laverde *et al.* 2005a, Quevedo *et al.* 2006a) may be due to the relatively high elevation to which *M. olivaceus* extends there.

RUFOUS-BREASTED FLYCATCHER *Leptopogon rufipectus* Fairly common at El Talisman (1), La Aurora (1+1; 2+1†) and Alto Cantagallos (0; 1†). Though Hilty & Brown (1986) only noted a handful of East Andean localities, it is widespread at montane forest sites, e.g. at Chicaque (TMD, BH) and on the east slope at Pajarito and Serranía de los Churumbelos (ICN specimen).

ORNATE FLYCATCHER *Myiotriccus ornatus* Common, at Cerro de la Paz (1,300 m: 4+1; 2+1), Alto Honduras (7+1), El Talisman (1; 1†) and Alto Cantagallos (1).

STREAK-THROATED BUSH-TYRANT *Myiotheretes striaticollis* One seen and video recorded at close quarters at La Luchata (TMD, JEAC). Also at Suratá (Avendaño 2005). Although very few localities are noted in the East Andes by Hilty & Brown (1986), the species is sometimes present in degraded habitats and is probably widespread.

SMOKY BUSH-TYRANT *Myiotheretes fumigatus* Flock of *c.*8 seen at Lepipuerto and mist-netted at Filo Pamplona (1). Also present at Iguaque (C. D. Cadena *in litt.* 2006) and Suratá (Avendaño 2005). It is probably more widespread in remaining high-elevation forests in the East Andes, though published records exist only from Bogotá and Bucaramanga (Hilty & Brown 1986).

YELLOW-BELLIED CHAT-TYRANT *Ochthoeca diadema* Common in montane forest at Alto Cantagallos (5; 2+1), Lepipuerto (1+1), Filo Pamplona (1 in bamboo forest at 3,100 m) and La Aurora (0; 1).

GOLDEN-CROWNED FLYCATCHER *Myiodynastes chrysocephalus* Fairly common at Cerro de la Paz (1,300 m), Alto Honduras, El Talisman and La Luchata, filling an apparently large gap in its range, with published records only from Bogotá and Bucaramanga (Hilty & Brown 1986). However, there is a specimen from Charalá (ICN) and sight records at Santa María, Mámbita (F. G. Stiles *in litt.* 2006) and laguna de Pedro Palo (J. Beckers *in litt.* 2006), making us suspect that it is widespread.

DUSKY PIHA *Lipaugus fuscocinereus* Common and sound-recorded in montane forest on both slopes, at El Talisman, Alto Cantagallos, Filo Pamplona and La Aurora.

GOLDEN-WINGED MANAKIN *Masius chrysopterus* Common in lower montane forest in Yariguíes including at Alto Honduras (8+3, 1†), Bajo Cantagallos and El Talisman (3: Fig. 8). The male specimen agrees broadly with those from Charalá at ICN, which are closest to the *M. c. pax* group, but possibly represent an undescribed race (Salaman *et al.* 2002b).

BARRED BECARD *Pachyramphus versicolor* At Alto Cantagallos (TMD observation; 1) and a male in a mixed-species flock at La Aurora (TMD).

BLACK-BILLED PEPPERSHRIKE *Cyclarhis nigrirostris* Fairly common at Alto Honduras (sound-recorded) and El Talisman.

SHARPE'S WREN *Cinnycerthia olivascens* Common at Alto Cantagallos (5; 7†), Lepipuerto (4), Filo Pamplona and La Aurora (recordings; 2†). *C. olivascens* is known in the East Andes only north to Boyacá (Hilty & Brown 1986), 150 km to the south, though Fjeldså & Krabbe (1990) suggested a more widespread distribution and there is an ICN specimen from Cachalú. The Yariguíes population represents an undescribed subspecies, distinguishable from: (i) *C. o. olivascens* of the Central and West Andes, (ii) more rufous populations of the southern Central and East Andes (perhaps *C. o. bogotensis*: Brumfield & Remsen 1996) and (iii) less rufous Santander and Cundinamarca populations (which may alternatively be *C. o. bogotensis*: Brumfield & Remsen 1996), by their darker head and paler throat (Avendaño & Donegan ms).

PALE-EYED THRUSH *Turdus leucops* Four males and a female trapped at La Luchata (0; 6+1, 2† both with enlarged gonads), and recently photographed at Primavera (C. Turner, M. Sharp & J. C. Luna *in litt*. 2006). *T. leucops* has been sound-recorded at Cachalú (C. D. Cadena *in litt*. 2006) but is apparently absent elsewhere on the west slope of the East Andes (Hilty & Brown 1986). The lack of records in June–July 2005 at La Luchata suggests seasonal (altitudinal?) movements, as in some other Neotropical thrushes such as Black Solitaire *Entomodestes coracinus* (Donegan & Dávalos 1999), or sensitivity to disturbance by a larger expedition team.

BROWN-BELLIED SWALLOW *Notiochelidon murina* Common over *páramo* at Lepipuerto on the west slope. Interestingly (given this is typically a species of farmland and urban areas), it was found in pristine habitat tens of km from human settlements or modified habitat. Strangely, *N. murina* was not present at similar habitat and elevation at Filo Pamplona, where Blue-and-white Swallow *Pygochelidon cyanoleuca* was common (again, interestingly, in remote, pristine habitat). These species may originally have been *páramo* specialists before range expansions following human landscape modification.

NICEFORO'S WREN *Thryothorus nicefori* Sound-recorded and observed at vereda El Alto, near Los Anacos (*c.*1,300 m) and finca El Rubí, vereda San Ignacio (*c.*1,540 m), above Galán, en route to La Luchata and La Aurora, respectively. Also observed by JEAC at the first locality on a previous visit and recently mist-netted (March 2007) in the Chucuri Valley near San Vicente (J. C. Luna; photograph). Not previously reported west of the río Suárez, though known from San Gil, just 30 km away (Renjifo *et al.* 2002). Although a small range extension, it is important given the tiny range and the species' Critically Endangered status (BirdLife International 2004). Vocalisations comprise combinations of melodic but flat *weee* and *oo* notes,

e.g. *weeee oo oo oo wee*, similar to Rufous-and-white Wren *T. rufalbus*. The *wee* notes are typically of 0.3–0.6 s duration at *c.*1.5–2.3 kHz; the *oo*'s each at 0.8–1.2 kHz and generally shorter (0.1–0.2 s). The species also makes various low-pitched and abrupt churrs. A detailed study of the voices and molecular biology of *T. nicefori* and *T. rufalbus* is in preparation (J. Parra *in litt.* 2006).

BLACK-EARED HEMISPINGUS *Hemispingus melanotis* At Alto Cantagallos (2; 1) and La Aurora (1), contrasting with the greater abundance and wider elevational range of *H. frontalis* (at 2,000–3,000 m on both slopes). *H. melanotis* was known previously in the East Andes only above Bucaramanga and around Bogotá (Hilty & Brown 1986, ABO 2000), but has also been seen at La Judía (ERB, JEAC) and Chicaque (C. D. Cadena *in litt.* 2006), and collected at Rondón (Santa Isabel) in Boyacá (ICN), making us suspect it is more widespread in suitable habitat.

GOLDEN-CROWNED TANAGER *Iridosornis rufivertex* Common at Lepipuerto (1) and Filo Pamplona (5+3). Reportedly scarce in the East Andes (Hilty & Brown 1986), but perhaps common in remaining high-elevation habitats elsewhere in Santander.

SAFFRON-CROWNED TANAGER *Tangara xanthocephala* Observed at El Talisman and La Luchata (TMD), and also reported at Zapatoca (Fundación Natura 2003). Previously known from the west slope of the East Andes only in the Serranía de Perijá and north to Cundinamarca, *c.*350 km apart (Hilty & Brown 1986). This relatively widespread forest-edge species is probably continuously distributed in the East Andes as it occurs at various sites in the main Andean range in Santander and Cundinamarca (JEAC, ERB).

FLAME-FACED TANAGER *Tangara parzudakii* Observed at various sites, including Alto Honduras (1, immature), El Talisman (where nesting in November 2006), Primavera (where an ICN specimen was taken by R. Ardila in 1984), Alto Cantagallos (0; 1), La Aurora and La Luchata, in secondary forest, scrub and primary forest treefall gaps. *T. parzudakii* was not previously known north of Cundinamarca in the East Andes (Hilty & Brown 1986), *c.*250 km to the south, although there is a population in Mérida, Venezuela (Isler & Isler 1999). Identified as the distinctive nominate form, due to the paler forecrown, compared to *lunigera* of the West Andes. Records at La Aurora (2,700 m) are unusually high.

GOLDEN-NAPED TANAGER *Tangara ruficervix* One observed recently in a mixed-species flock at El Talisman (JEAC). Few records on either slope of the East Andes north of Cundinamarca (Hilty & Brown 1986, Salaman *et al.* 2002b), but recently found at Pedro Palo (J. Beckers *in litt.* 2006) and there is a specimen from an unspecified locality in Santender (LSUMZ 61895).

METALLIC-GREEN TANAGER *Tangara labradorides* Observed at forest-edge in mixed-species flocks and trapped at some sites: La Aurora (2,700 m), La Luchata (JEAC), Alto Honduras (JEAC), El Talisman (0; 1†) and Alto Cantagallos (0; 1).

The former represents an unusually high elevation in Colombia. Though only a few published records and specimens exist from the East Andes north of Cundinamarca (Hilty & Brown (1986), the species is more widespread. In Santander, it has been recorded at Reserva El Diviso, above Bucaramanga (Asociación Santanderana de Ornitología unpubl.), Cachalú (Corredor de Conservación 2006) and Suaita (F. G. Stiles *in litt.* 2006), for example.

BLACK-CAPPED TANAGER *Tangara heinei* Fairly common at El Talisman, Bajo Cantagallos and La Luchata, generally in premontane second growth and forest-edge. Previously known in the East Andes only from Serranía de Perijá and around Bogotá, 250 km south of El Talisman, but it is also common at 1,700 m above Bucaramanga and in Parque Nacional Chicamocha, Aratoca, at similar elevations (JEAC), with numerous specimens (ICN) from Charalá, Suaita (Santander), various sites in Cundinamarca, Boyacá and from Pamplona (Norte de Santander), and observations at sites including Rogitama (J. Zuluaga & R. Chavarro *in litt.* 2006) and laguna de Pedro Palo (J. Beckers *in litt.* 2006). These suggest the species is widespread in the East Andes.

HEPATIC TANAGER *Piranga flava* Observed in second growth near La Luchata in July (TMD, JEAC), and recently recorded in La Judía at 1,400–1,700 m (ERB, JEAC) and Parque Nacional Chicamocha, at 1,700 m (JEAC). Not reported in the East Andes south of Norte de Santander, 100 km north of La Luchata (Hilty & Brown 1986, Isler & Isler 1999). The race *P. f. faceta*, considered present in this region (Isler & Isler 1999, Salaman *et al.* 2001), is known from few sites and specimens in Colombia.

PLUSHCAP *Catamblyrhynchus diadema* Trapped, bamboo forest below Filo Pamplona (1).

DULL-COLOURED GRASSQUIT *Tiaris obscura* Fairly common in secondary habitats of the west slope. Borrero & Hernández's (1961) records of *T. fuliginosa* from lowlands adjacent to Yariguíes refer to this species (Bates 1997).

SLATY FINCH *Haplospiza rustica* At La Luchata (0; 1♂†) and Alto Cantagallos (0; 1♂). Probably found sporadically in suitable habitat throughout the East Andes, with records in Norte de Santander (Rodríguez 1985), La Judía (JEAC), Otanche and Santa María, Boyacá (ICN specimens), and in Cundinamarca, on the east slope (Salaman *et al.* 2002b). Apparently a wanderer, being unpredictable in its occurrence (Salaman *et al.* 2002b).

BLACK-AND-WHITE SEEDEATER *Sporophila luctuosa* Observed on the west slope around San Vicente and El Carmen, and reported at Zapatoca (Fundación Natura 2003).

CITRINE WARBLER *Basileuterus luteoviridis luteoviridis* Fairly common at Lepipuerto (1†, sound-recorded) and uncommon at La Aurora (1†). The most

frequently heard call was a *c.*1.3-s chattering series of *chi* notes at *c.*3–10 kHz, increasing in frequency and volume towards the end.

BLACK-CRESTED WARBLER *Basileuterus nigrocristatus* Observed in bamboo forest below Filo Pamplona (JEAC). Few records, but the species is found at other sites including Rogitama (J. Beckers; J. Zuluaga & R. Chavarro *in litt.* 2006) and Suratá (JEAC).

RUSSET-CROWNED WARBLER *Basileuterus coronatus* Common in premontane and montane forest at El Talisman (3; 2), Alto Cantagallos (2; 2), La Aurora (4; 2+2, 1†) and La Luchata (3+4; 5+9). Though Hilty & Brown (1986) noted no records north of Boyacá, it has been recorded at various sites in the main cordillera in Santander (JEAC, ERB) including Suratá (JEAC) and near the Boyacá/Santander border in Rogitama (J. Becker; R. Chavarro & J. Zuluaga *in litt.* 2006).

RUSSET-BACKED OROPENDOLA *Psarocolius angustifrons sincipitalis* Flocks of up to 30 at El Talisman (down to *c.*1,700 m), Primavera (M. Sharp photographs), Bajo Cantagallos, Plan de Álvarez (900–1,350 m) and below La Aurora (*c.*2,100 m), and sound-recorded at Alto Honduras. Also reported at Landázuri (Fundación Natura 2003). All observed sufficiently well were of the race *sincipitalis*, due to their strong yellow eyebrow. This form is restricted to the East Andes and is considered poorly known (Jaramillo & Burke 1999). A broad repertoire of calls is given by *P. a. sincipitalis*, including loud sequences rising rapidly in frequency, and low unmusical grunts not dissimilar to those of the montane group elsewhere in Colombia.

SCARLET-RUMPED CACIQUE *Cacicus uropygialis* Up to 15 at El Talisman (TMD), Bajo Cantagallos (M. Sharp) and Alto Cantagallos (JEAC); also reported at Landázuri (Fundación Natura 2003) and present in the main cordillera at La Judía (ERB, JEAC), but not previously reported north of Cundinamarca on the west slope of the East Andes (Hilty & Brown 1986, Renjifo *et al.* 2002).

MOUNTAIN CACIQUE *Cacicus chrysonotus* Common at El Talisman, Alto Cantagallos and La Aurora (0; 1), where noisy groups were sound-recorded in mixed flocks with Green Jay *Cyanocorax yncas* and Mountain Grackle *Macroagelaius subalaris*. The most common call involved 0.15-s unmusical *dup* or *chip* notes given singly or in rapid series' of up to five. Each note includes multiple overtones or principal notes (e.g. at 2.5, 3.7, 5.0, 6.0 and 7.2 kHz), with those in mid-range (e.g. 5.0 kHz) sometimes lasting slightly longer and being stronger, or sometimes given in sequences of varying frequency. Replaced at lower elevations (e.g. Bajo Simacota) by Yellow-rumped Cacique *C. cela*.

YELLOW-BILLED CACIQUE *Amblycercus holosericeus australis* One observed (TMD) and sound-recorded in tall reeds at Lepipuerto. One call recorded was *chu chu weeeee chrrrrrrrrrrrrrrrrrrrrr* (Fig. 3). Another call was a repeated

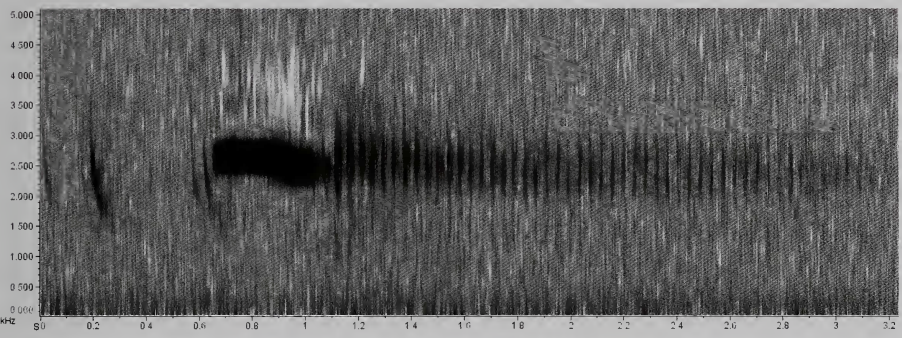


Figure 3. Sonogram of song of Yellow-billed Cacique *Amblycercus holosericeus australis*, Lepipuerto, Serranía de los Yariguíes, January 2005. Recording by TMD.

waak waak waak waak waak . . . comprising notes at 1.3–2.1 kHz, repeated at *c*.4/s. The species has a wide repertoire (Jaramillo & Burke 1999), but the former calls are somewhat different from those reported for the nominate in Peru (Jaramillo & Burke 1999, Fjeldså & Krabbe 1990), though similar to those reported in the Sabana de Bogotá (ABO 2000). A detailed vocal study is warranted.

MOUNTAIN GRACKLE *Macroagelaius subalaris* Rare at Alto Cantagallos (BH), eight observed recently above El Talisman (JEAC) and very common at La Aurora. Also reported near Zapatoca (Fundación Natura 2003), with two old specimens apparently from 2,750 m in San Vicente de Chucurí (Renjifo *et al.* 2002). Frequently flocked with Mountain Cacique *Cacicus chrysonotus* and Green Jay *Cyanocorax yncas*. At La Aurora, flocks of up to 30 observed daily and sound-recorded. The most common contact calls were short (<0.05 s) monotonous *dup* noises at 2.8–4.0 kHz. *M. subalaris*, like Gorgeted Wood-quail *O. strophium*, was until recently considered amongst the most threatened birds in the world, being known only from a few montane forests in Colombia's East Andes, but it has been observed recently at several new sites (Cadena *et al.* 2002, Rodriguez *et al.* 2005, Velásquez *et al.* 2005, Cortés *et al.* 2006). *M. subalaris* appears to have a smaller (higher) elevational range and thus a smaller geographical range than *O. strophium* and may be subject to higher threat levels. We conservatively estimate the *M. subalaris* population in Yariguíes to be at least 1,400 individuals. However, a more detailed survey is needed.

PÁRAMO SEEDEATER *Catamenia homochroa* At Filo Pamplona (3). In the East Andes reported only from high-elevation sites in Boyacá and Cundinamarca, 150 km to the south, and from Perijá (Hilty & Brown 1986).

YELLOW-BELLIED SISKIN *Carduelis xanthogastra* At El Talisman (sound-recordings) and observed in forest and second growth below Alto Honduras. Supposedly little known in the East Andes, where reported from Norte de Santander with old records around Bogotá (Hilty & Brown 1986), but also found at Rogitama

(J. Beckers; R. Chavarro *in litt.* 2006) and la Plazuela, Tona (2,200 m: JEAC; G. Moreno *in litt.* 2006). Common in premontane secondary habitats and is probably continuously distributed in the East Andes.

ORANGE-BELLIED EUPHONIA *Euphonia xanthogaster* Fairly common at Cerro de la Paz at 1,300 m (3; 3†), Alto Honduras (3; 10+4), El Talisman and La Luchata (6+3), and also observed at Agua de la Virgen (Donegan *et al.* 2003). *E. xanthogaster* ranges in the Magdalena lowlands to Puerto Olaya (E. Constantino *in litt.* 2006). Calls recorded in Yariguíes included *zhurr*, *zhurr-dit* and *zhurr-dit-dit*, as described by Isler & Isler (1999), the *zhurr* being 0.1 s long at *c.*3.3–3.7 kHz, and the *dit* comprising a falling then rising whistle at 4.0–6.0 kHz.

Unusual elevational records

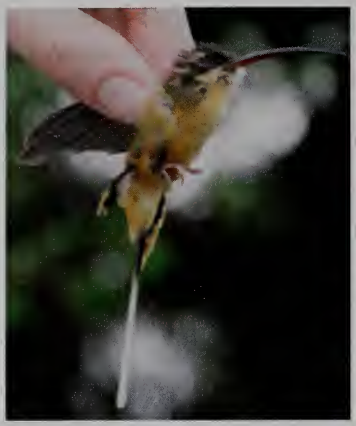
Several additional unusual elevational records were noted on the basis of a non-exhaustive search of major references (Hilty & Brown 1986, Ridgely & Tudor 1989, 1994, Fjeldså & Krabbe 1990, Parker *et al.* 1996, Ridgely & Greenfield 2001, Hilty 2003) and certain publications containing multiple new elevational records for Colombia (Donegan & Dávalos 1999, Salaman *et al.* 1999, Stiles *et al.* 1999, ABO 2000, Renjifo *et al.* 2002, Salaman *et al.* 2002a,b, Cuervo *et al.* 2003, Strewe & Navarro 2004, Krabbe *et al.* 2006). None of these records is claimed as 'new' due to the sporadic nature of publication of new elevational records and the many unpublished records. For each species, the lowest and highest elevational records are specified in [], together with the apparently extralimital or unusual elevation at which we recorded it. All records relate to trapped and photographed birds unless initials are noted, in which case a field observation is involved. Records for Colombia are from Hilty & Brown (1986); for Ecuador, Ridgely & Greenfield (2001); for Venezuela, Hilty (2003); and for elsewhere, Fjeldså & Krabbe (1990), unless otherwise stated. Only elevational 'extensions' of 200 m+ are presented and only records at extralimital elevational sites detailed. We intend to fully detail elevational ranges of all species we have recorded on both slopes of Yariguíes in a future publication.

Rusty-faced Parrot *Hapalopsittaca amazonina* [2,000–3,000 m] 1,500 m (at Honduras Alto, Primavera and Bajo Cantagallos) and to the species' upper elevational limit at Lepipuerto (TMD). **Rufous-breasted Hermit** *Glaucis hirsutus* [To 1,100 m] 1,300 m (Cerro de la Paz). **Band-tailed Barbthroat** *Threnetes ruckeri* [To 1,050 m] 1,300 m (Cerro de la Paz). **Green-fronted Lancebill** *Doryfera ludovicae* [1,400–2,850 m; once to 3,150 m in West Andes: Krabbe *et al.* 2006]. To 3,200 m (Filo Pamplona) and down to 500 m (Montaña Pedro Elías and Plan de Álvarez: JEAC). **Green Violetear** *Colibri thalassinus* [600–3,000 m] 3,200 m (Filo Pamplona). **Speckled Hummingbird** *Adelomyia melanogenys* [1,000–2,500 m; 3,400 m Ecuador] 2,900 m (Lepipuerto). **Buff-tailed Coronet** *Boissonneaua flavescens* [1,400–2,800 m; to 3,600 or 4,200 m in Venezuela and 3,150 m in West

Andes: Krabbe *et al.* 2006] 3,200 m (Filo Pamplona). **White-necked Puffbird** *Notharchus hyperrynchus* [To 500 m; to 1,200 m in Venezuela and 700 m in Central Andes of Colombia: Salaman *et al.* 2002a] 1,200 m (Cerro de la Paz: BH). **Beautiful Woodpecker** *Melanerpes pulcher* [To 500 m] To 1,350 m (Cerro de la Paz at 1,000 m: TMD, and Plan de Álvarez at 1,000–1,350 m: JEAC). **Stripe-breasted Spinetail** *Synallaxis cinnamomea* [900–2,100 m] 3,100 m (sound-recorded below Filo Pamplona: JEAC). **Rusty-winged Barbtail** *Premnornis guttuligera* [1,600–2,500 m; to 2,900 m in Venezuela] 2,700 m (La Aurora). **Spotted Barbtail** *Premnoplex brunnescens* [1,300–2,600 m; or 2,750 m: Fjeldså & Krabbe 1990] 3,100 m (below Filo Pamplona: TMD & JEAC). **Montane Foliage-gleaner** *Anabacerthia striaticollis* [1,000–2,400 m; 2,600 m Venezuela] 2,700 m (La Aurora: TMD & JEAC). **Lineated Foliage-gleaner** *Syndactyla subalaris* [950–2,400 m; 2,600 m Ecuador] 2,700 m (La Aurora). **Slaty-winged Foliage-gleaner** *Philydor fuscipenne* [To 1,400 m] 1,600 m (Alto Honduras). **Olivaceous Woodcreeper** *Sittasomus griseicapillus* [To 1,550 m; 1,700 m Ecuador; 2,300 m in Venezuela and Bolivia; 1,800 m in Central Andes: Salaman *et al.* 2002a] 2,000 m (El Talisman). **Brown-billed Scythebill** *Campylorhamphus pusillus* [To 2,200 m; 2,600 m West Andes: Cuervo *et al.* 2003, Krabbe *et al.* 2006] 2,700 m (La Aurora). **Dot-winged Antwren** *Microrhopias quixensis* [To 1,100 m] 1,300 m (Cerro de la Paz: TMD). **White-bellied Antpitta** *Grallaria hypoleuca* [1,500–2,500 m] 2,700 m (sound-recorded La Aurora). **Brown-capped Tyrannulet** *Ornithion brunneicapillus* [To 900 m; 1,200 m Venezuela] 1,300 m (sound-recorded Cerro de la Paz: TMD). **Southern Bentbill** *Oncostoma olivaceum* [To 1,000 m] 1,300 m (Cerro de la Paz: TMD). **Scale-crested Pygmy-Tyrant** *Lophotriccus pileatus* [300–2,300 m] 2,900 m (heard Lepipuerto: TMD). **Slate-headed Tody-flycatcher** *Poecilotriccus sylvia* [To 1,100 m] 1,350 m (Cerro de la Paz: JEAC). **White-throated Spadebill** *Platyrinchus mystaceus* [To 2,000 m] 2,400 m (Alto Cantagallos). **Ruddy-tailed Flycatcher** *Terenotriccus erythrurus* [To 900 m; 1,000 m in Ecuador; 1,200 m: Parker *et al.* 1996] 1,350 m (Cerro de la Paz: JEAC). **Green-and-black Fruiteater** *Pipreola riefferii* [1,500–2,700 m; 3,050 m Venezuela and exceptionally 3,300 m Ecuador] 3,200 m (Filo Pamplona). **Song Wren** *Cyphorhinus phaeocephalus* [To 1,000 m] 1,300 m (heard Cerro de la Paz (TMD) and trapped below this). **Half-collared Gnatwren** *Microbates cinereiventris* [To 900 m; 1,200 m elsewhere: Parker *et al.* 1996] 1,300 m (Cerro de la Paz: TMD, and trapped below this). **Crimson-backed Tanager** *Ramphocelus dimidiatus* [To 1,700 m; to 2,600 m Bogotá: ABO 2000] 2,000 m (El Talisman where recently mist-netted: J. C. Luna *in litt.* 2006). **Common Bush-tanager** *Chlorospingus ophthalmicus* [1,000–2,700 m; to 3,000 m Venezuela] 3,200 m (Filo Pamplona).

Discussion

To date, we have recorded over 450 bird species in Serranía de los Yariguíes. A surprising number represent significant range or elevational extensions. Threatened



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species have been discussed elsewhere and include four species rated Critically Endangered at the time of our study: *Odontophorus strophium*, *Macroagelaius subalaris*, *Thryothorus nicefori* and *Amazilia castaneiventris*. Two of these (*O. strophium* and *M. subalaris*) have been downgraded to Endangered (or are proposed for such) due to the discovery of healthy populations in Yariguíes and elsewhere. Several new taxa including *Atlapetes latinuchus yariguierum*, at least three new *Scytalopus* taxa and new subspecies of *Grallaricula nana*, *Cinnycerthia olivascens*, *Synallaxis unirufa* and *Anisognathus lacrymosus* have been or will be described in the near future.

The number of new distributional records presented herein demonstrates the essentially unexplored nature of Yariguíes prior to our studies. It is surprising that so many undescribed taxa and new distributional records should be encountered *c.*100 km from the headquarters of the government's biological collection and research arm, Instituto Alexander von Humboldt (IAVH), or just four hours' travel from Bogotá. Yariguíes is relatively safe, particularly in the San Vicente and El Carmen regions, though negative misconceptions involving past guerrilla activity pervade the public consciousness in Colombia.

The avifauna of lower elevations of Yariguíes includes elements shared with the Chocó / Nechí Endemic Bird Areas, the latter of Critical conservation priority (Stattersfield *et al.* 1998). Many species we found at such elevations are also present in lowland forests of northern Antioquia, south Bolívar (Salaman & Donegan 2001, Salaman *et al.* 2002), and Serranía de las Quinchas in Boyacá (Quevedo *et al.* 2006a). The premontane fauna is likewise essentially similar to that of Serranía de las Quinchas (Stiles *et al.* 1999, Stiles & Bohórquez 2000, Laverde *et al.* 2005a).

The montane and *páramo* fauna of Yariguíes was the most interesting. As might be expected, the majority of species are shared with montane East Andes sites such as Cachalú / Charalá, Suratá, Rogitama and La Judía. At least four undescribed endemic subspecies appear to be restricted to Yariguíes: of *Scytalopus griseicollis*, *Synallaxis unirufa*, *Cinnycerthia olivascens* and *Anisognathus lacrymosus*. A further undescribed *Scytalopus* (not discussed in detail herein) may also be a Yariguíes

Captions to plates on opposite page

Figure 4. Tawny-bellied Hermit *Phaethornis syrmatophorus syrmatophorus*, El Talisman, Serranía de los Yariguíes, January 2003 (Thomas M. Donegan/Proyecto EBA)

Figure 5. Red-headed Barbet *Eubucco bourcieri*, Primavera, Serranía de los Yariguíes, February 2006 (M. Sharp/Proyecto YARÉ)

Figure 6. Lacrimose Mountain-tanager *Anisognathus lacrymosus* subsp. nov., Filo Pamplona, Serranía de los Yariguíes, July 2005 (Blanca Huertas/Proyecto YARÉ)

Figure 7. White-chinned Thistletail *Schizoeaca fuliginosa*, Filo Pamplona, Serranía de los Yariguíes, January 2006 (Blanca Huertas/Proyecto YARÉ)

Figure 8. Golden-winged Manakin *Masius chrysopterus*, El Talisman, Serranía de los Yariguíes, January 2003 (Thomas M. Donegan/Proyecto EBA)

Figure 9. Black-winged Saltator *Saltator atripennis caniceps*, La Luchata, Serranía de los Yariguíes. June 2005 (Blanca Huertas/Proyecto YARÉ)

endemic (Donegan & Avendaño ms). Such endemisms, if confirmed, may be due to the geographical isolation of the Yariguíes massif above 2,500 m.

A handful of the Yariguíes montane avifauna present counter-intuitive and unexplained biogeographical affinities. In particular, *Phaethornis s. syrmatophorus*, *Grallaricula nana* subsp. and a Three-striped Warbler *Basileuterus tristriatus* subsp. (Salaman *et al.* 2002a) each range across the Central Andes and Yariguíes, but are replaced by different subspecies on the east slope of the East Andes. The presence of multiple 'subspecies' in Santander and Norte de Santander that replace one another on different slopes, but which have wide ranges elsewhere is a situation also postulated for Grey-breasted Wood-wren *Henicorhina leucophrys* (Brewer 2001) and Slaty Brush-finch *Atlapetes schistaceus* (Paynter 1972), whilst up to three Common Bush-tanager *Chlorospingus ophthalmicus* races are considered present in Santander and Norte de Santander (Isler & Isler 1999). The similarities between disjunct Central and East Andes populations are borne out by specimens and, in some cases, vocalisations. Yariguíes populations allied to Central Andes populations could be relicts, the result of relatively recent colonisations between Andean ranges, or might indicate that the species concerned have or formerly possessed wider and continuous ranges to the south in the Central and East Andes. Such taxa and patterns require further investigation.

Following recent studies (Stiles *et al.* 1999, Stiles & Bohórquez 2000, ABO 2000, Salaman *et al.* 2002b, Laverde *et al.* 2005a, Quevedo *et al.* 2006a) and this paper, the avifauna of the East Andes is much better known than it was 20 years ago, on the west slope from Cundinamarca north to Santander and most of the east slope to Norte de Santander, from sea level to over 3,000 m. Attention must now focus on the Perijá range, the northernmost extension of the East Andes, which has barely been subject to detailed study and which almost certainly harbours undescribed taxa, subspecies that are strong candidates for species rank, and new distributional records in its dwindling and threatened forests.

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Addresses: Thomas Donegan, Fundación ProAves, 33 Blenheim Road, Caversham, Reading RG4 7RT, UK, e-mail: tdonegan@proaves.org / thomasdonegan@yahoo.co.uk. Jorge Enrique Avendaño-C, Escuela de Biología, Universidad Industrial de Santander, A.A. 0678 Bucaramanga, Colombia, e-mail: jorgeavec@gmail.com / jorgeavec@ciencias.uis.edu.co. Elkin R. Briceño-L., Corporación Autónoma Regional para la Defensa de la Meseta de Bucaramanga (CDMB), Cra. 33 #69–04, Bucaramanga, Colombia, e-mail: elkinbl@hotmail.com. Blanca Huertas, University College London / Natural History Museum, London, UK, e-mail: b.huertas@nhm.ac.uk / blancahuertas@yahoo.com

New distributional and other bird records from Tatamá Massif, West Andes, Colombia

by María Ángela Echeverry-Galvis & Sergio Córdoba-Córdoba

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The West Andes of Colombia have received comparatively little ornithological attention (Proyecto Biomap & Instituto Humboldt 2004). Avian inventories are available for a number of localities in dptos. Antioquia, Valle del Cauca, Cauca and Nariño (e.g. Echeverri 1986, Negret 1994, Salaman 1994, Hilty 1997, Donegan & Dávalos 1999, Cuervo *et al.* 2003, Krabbe *et al.* 2004). In recent years, several